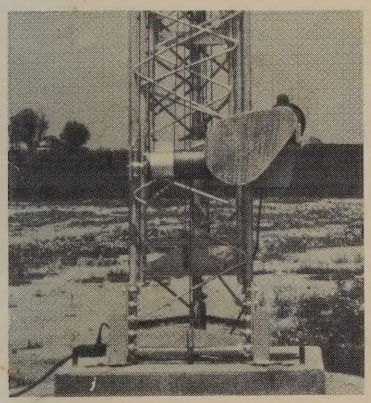
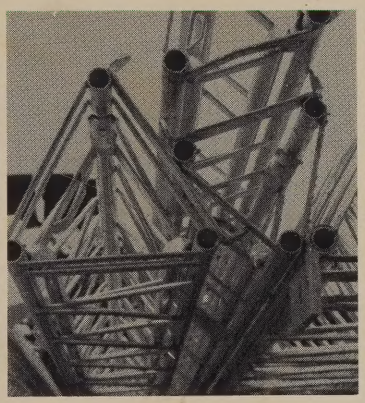
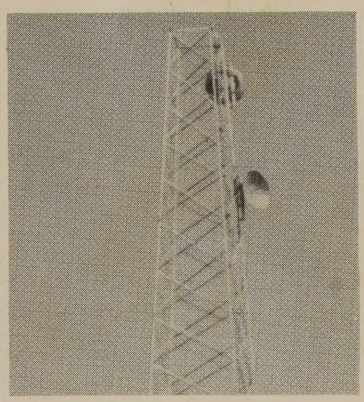
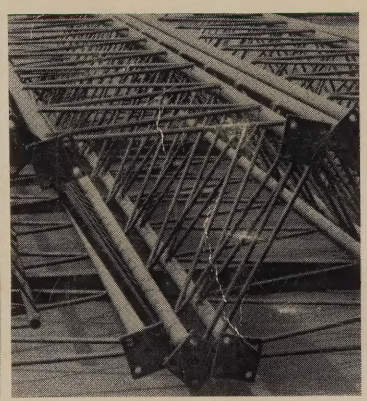
TRI-EX TOWER CORPORATION

COMMERCIAL CATALOG

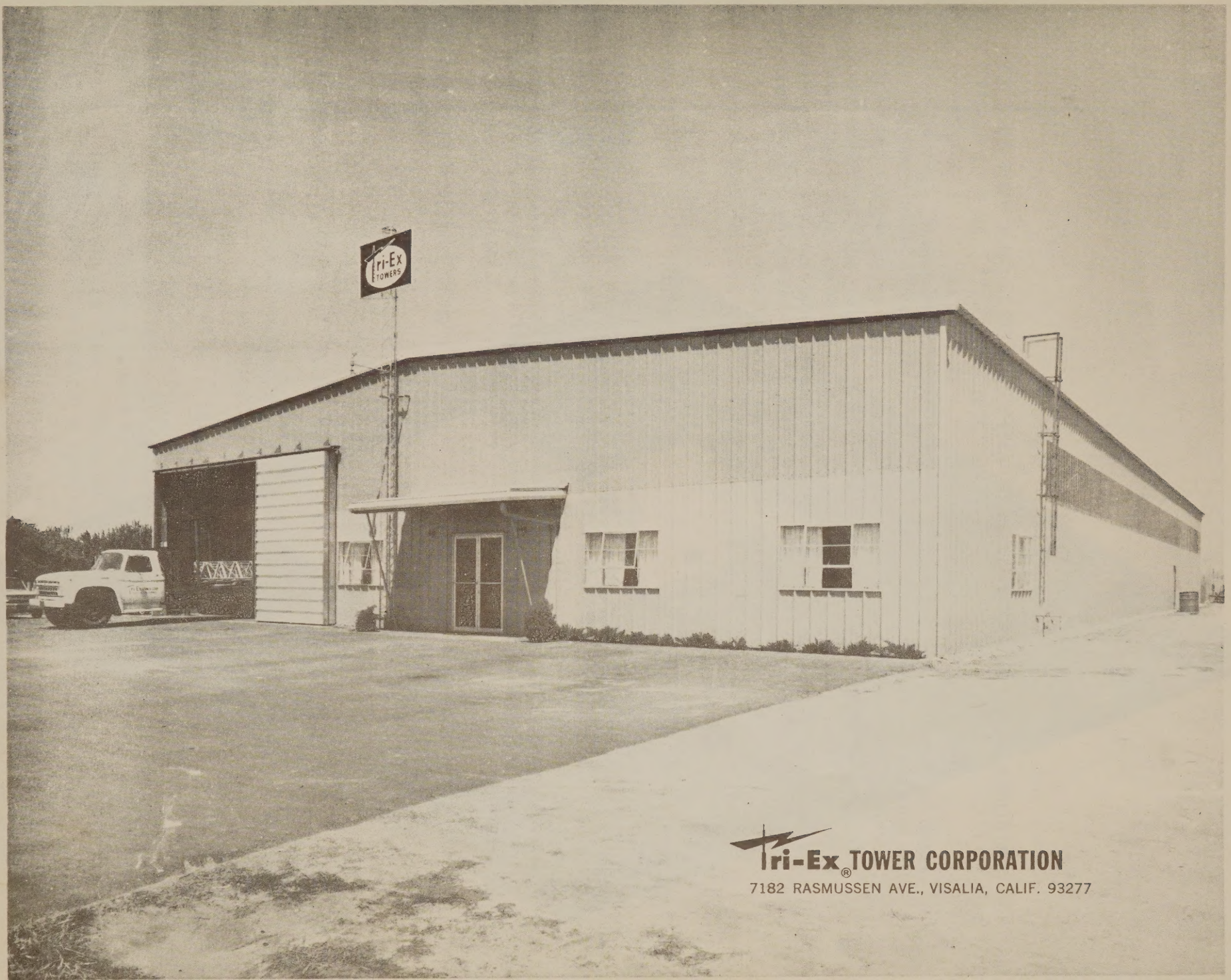





FREESTANDING TOWERS
GUYED TOWERS
MICROWAVE TOWERS
SQUARE RIGGER SERIES
TRAILER TOWERS

Tri-Ex®
TOWER
CORPORATION

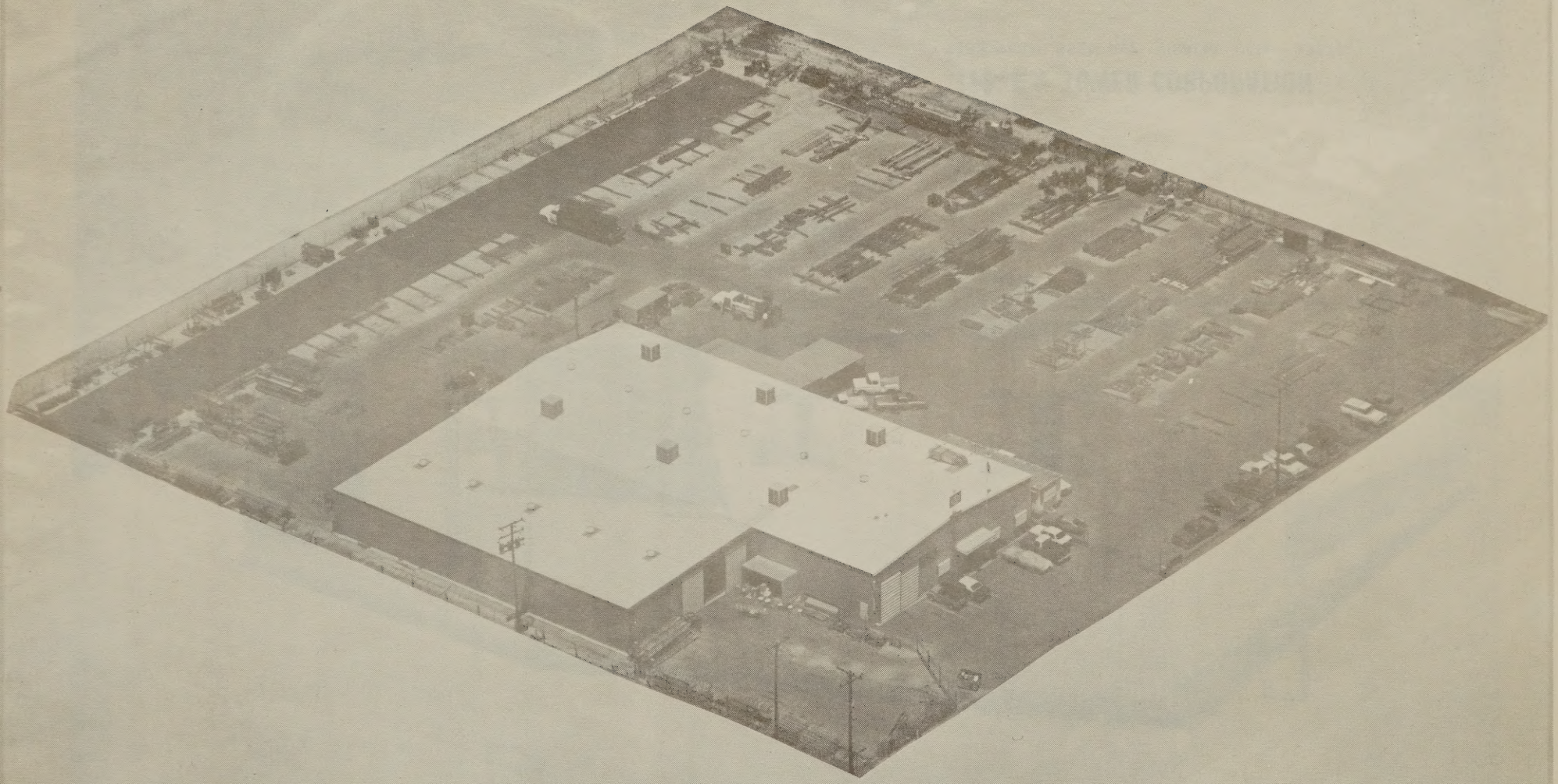
7182 RASMUSSEN AVENUE, VISALIA, CALIFORNIA 93277

PHONE (209) 732-8383



Tri-Ex® TOWER CORPORATION

7182 RASMUSSEN AVE., VISALIA, CALIF. 93277



Tri-Ex® TOWER CORPORATION

7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

IN THIS NEW CATALOG YOU WILL FIND TOWERS AND ACCESSORIES TAILORED FOR YOUR SPECIFIC USE.

Sound design, expert workmanship and fine materials are elements of quality that have always been recognized as essentials of dependable service and long life. Constant research and development, experienced workmanship, rigid manufacturing controls and careful inspection are combined with the finest materials obtainable to make Tri-Ex products. Our endeavor is to always develop, design and manufacture a uniform product that does not obsolete the customer who owns a Tri-Ex product. It is with conviction, therefore, that we reaffirm our pledge to consistently manufacture Tri-Ex products that we can truly say are better products.

INFORMATION . . . . .

All information listed in this catalog is compiled from our experience records. Weights and physical dimensions are actual - subject to the usual permissible variations. Recommended safe working loads herein listed are based upon practical engineering design and actual tests, and are the results of conservative averages. We realize that this catalog cannot contain complete technical details and deviations. We welcome the opportunity of furnishing you with additional information.

ENGINEERING SERVICE . . . . .

Our engineering department is ready to assist in the solution of special problems, and its service is available at all times to our customers.

RETURN OF GOODS . . . . .

No goods, standard or special, may be returned for credit without our written authority.

DELAYS . . . . .

No liability on the part of the Company will be accepted for any delays in manufacturing or shipping caused by fire, strikes, lockouts, war, insurrection, inability to secure cars or material, government interference or regulations, delays in transportation or contingencies beyond our control.

TYPICAL USERS OF TRI-EX PRODUCTS

Two-Way Communications	Mobile Communications
U.S. Navy	U.S. Army
U.S. Air Force	Portable Lighting
Corps of Engineers	Civil Defense
Ham	T V
FM & Radio Broadcast	Petroleum Industry
Pipeline Companies	Highway Construction
Meteorological	Mining Companies
State & Municipal	Airports
Portable Emergency Communications	Research & Development Companies

Many Others Not Here Listed

NOTICE

The Seller warrants that, at the time of shipment, the products manufactured or offered by the Seller are free from defects in material and workmanship. The Seller's obligation under this warranty is limited to replacing or repairing such products within one year from the date of shipment. No material will be accepted for replacement or repair without the written authority of the Seller. Replacement or repair will only be made after examination of the products returned to the Seller for this purpose and which have been found to be defective by the Seller. All shipping charges on returned material must be prepaid by the buyer. Seller makes no other warranty of any kind, expressed or implied.

Seller shall in no event be liable for consequential damages of any nature whatsoever as a result of the use of the products manufactured or offered by the Seller whether in accordance with directions or not.

Delivery promises, prior to or after receipt of order are necessarily approximate. The Seller will make every effort to fill orders within the time promised. If conditions arise which prevent compliance with delivery schedules, the Seller shall not be liable for any damage or penalty of any kind whatsoever for delay in delivery or for failure to give notice of delay and such delays shall not constitute grounds for cancellation.

The Seller shall not be liable for delay by reason of inability, due to causes beyond its reasonable control, to obtain the necessary labor, materials or manufacturing facilities, or for delay due to the elements, acts of God, acts of Civil or Military authorities, priorities, fires, floods, epidemics, war, riot, accidents to machinery, delays in transportation or other causes beyond the control of the Seller, whether or not similar to the foregoing.

STACKED TOWERS

Tri-Ex® TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

STACKED
TOWERS

New Tri-Ex T-9 TOWER

Perfect for the BUSINESS RADIO SERVICE and TWO-WAY communication antenna installations. Designed for heights of 30 feet to 100 feet.

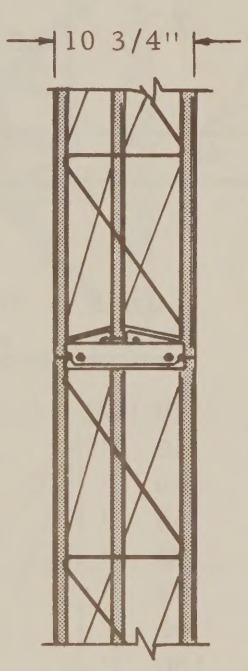
Easy to erect. Sections fit together instantly and with perfect alignment of bolt holes. Bolts are installed through mating plates on all three tower faces. No holes through the legs; no swaged tight fits to fix!

All welding performed in precision jigs by certified welders and by newest type of "slag-free" welding equipment. This provides a better, cleaner metal base to take the HOT-DIPPED GALVANIZED finish after fabrication which increases service life.

Diagonal face bracing of solid steel rod provides great strength and minimum wind-drag. Easy to climb; horizontal steps on all faces of tower.

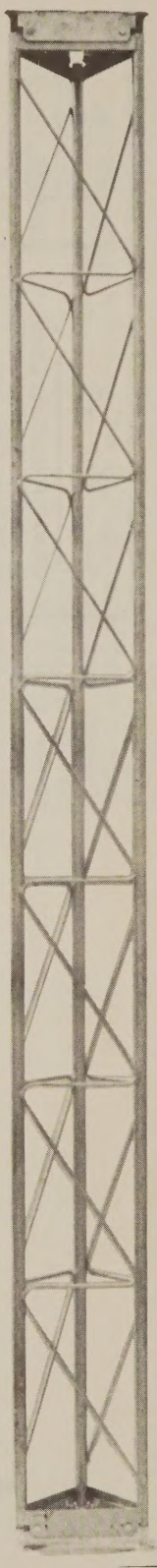
Towers require guying as shown on reverse side of page. Complete tower kits with recommended guying equipment are also listed. Kits include appropriate number of 10 foot sections for each tower height shown, top plate, flat base and guying accessories.

TOP PLATE



SECTION JOINT

BASE PLATE

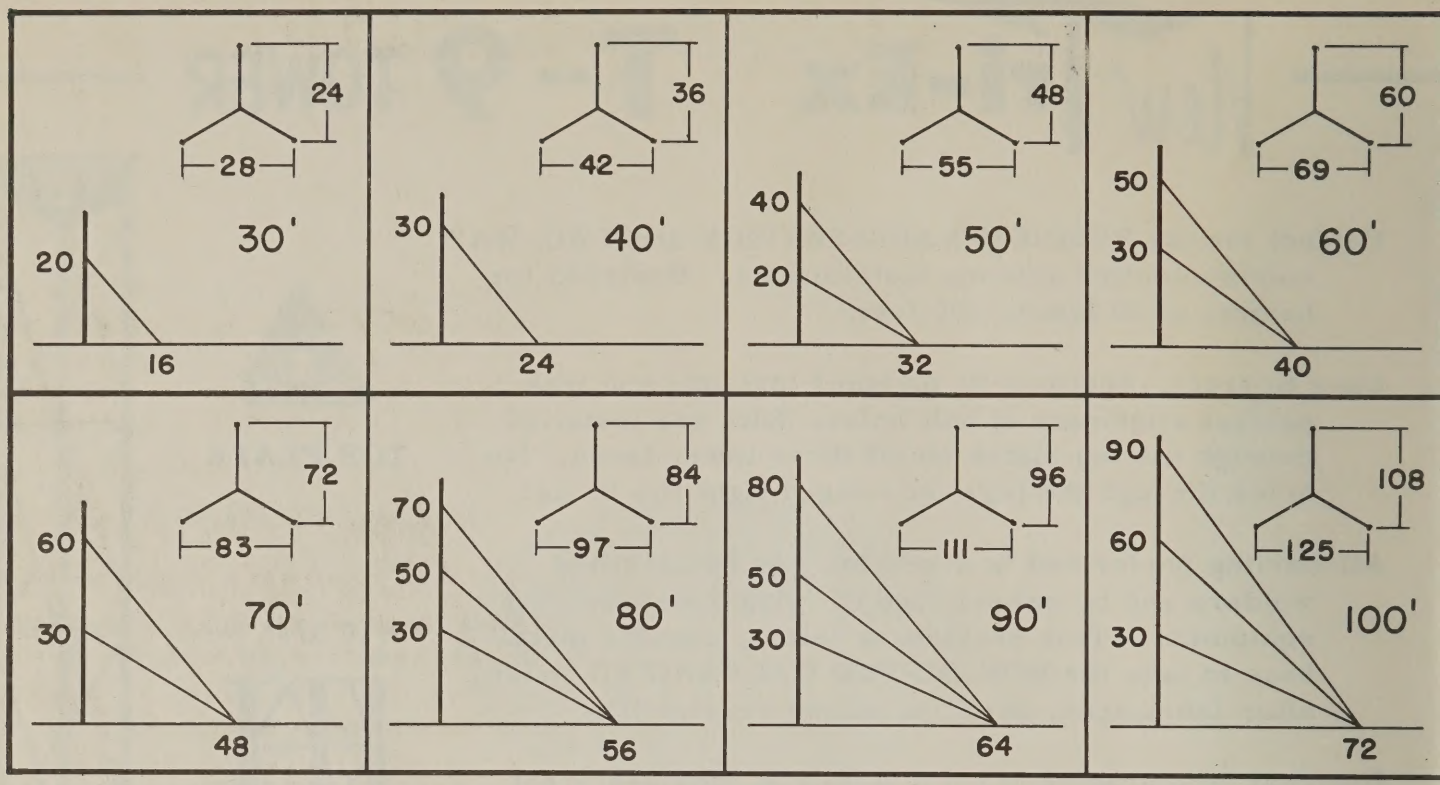


10-FOOT SECTION

Model		Weight
T-9	Ten foot section	40 lbs.
FB-9	Flat base plate	5 lbs.
PB-9	Peak roof base	15 lbs.
TP-9	Top plate (2" I.D.)	5 lbs.
TPMA	Top plate (2 3/8" I.D.)	7 lbs.
MP-9	Mast anchor plate (2" I.D.)	3 lbs.
CDR-9	Rotator plate	3 lbs.
EF-9	Erection fixture	17 lbs.

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

TYPICAL INSTALLATIONS

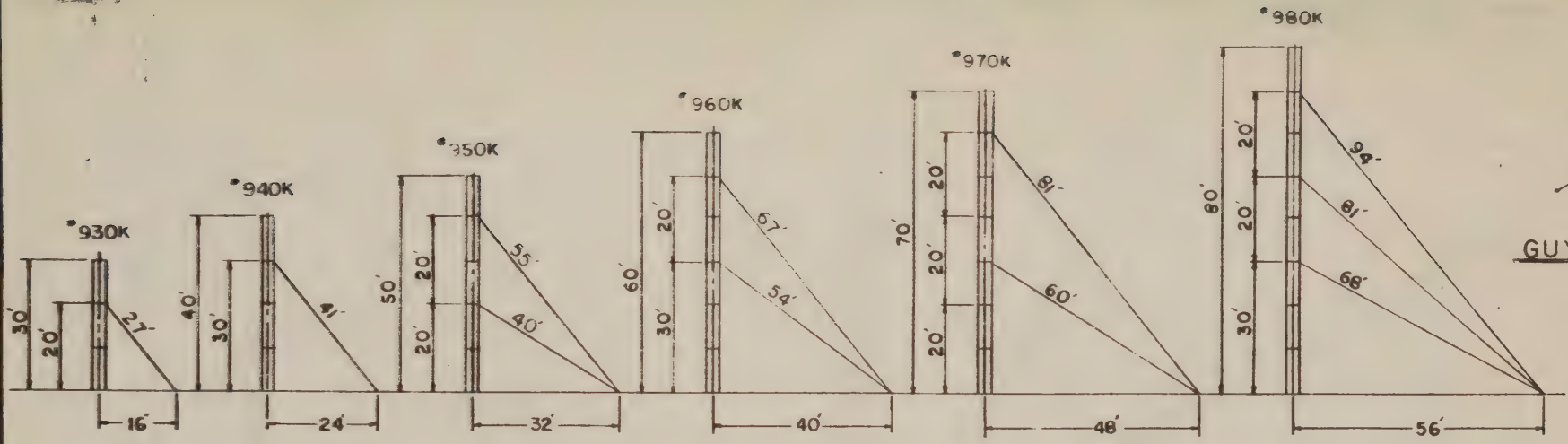


Tower Height	Number of guys	Guy Wire feet	Clamp MA-18	Thimble TH-316	Turnbuckle H-16
30 feet	3	82	12	3	3
40 "	3	125	12	3	3
50 "	6	285	24	6	6
60 "	6	365	24	6	6
70 "	6	425	24	6	6
80 "	9	730	36	9	9
90 "	9	810	36	9	9
100 "	9	920	36	9	9

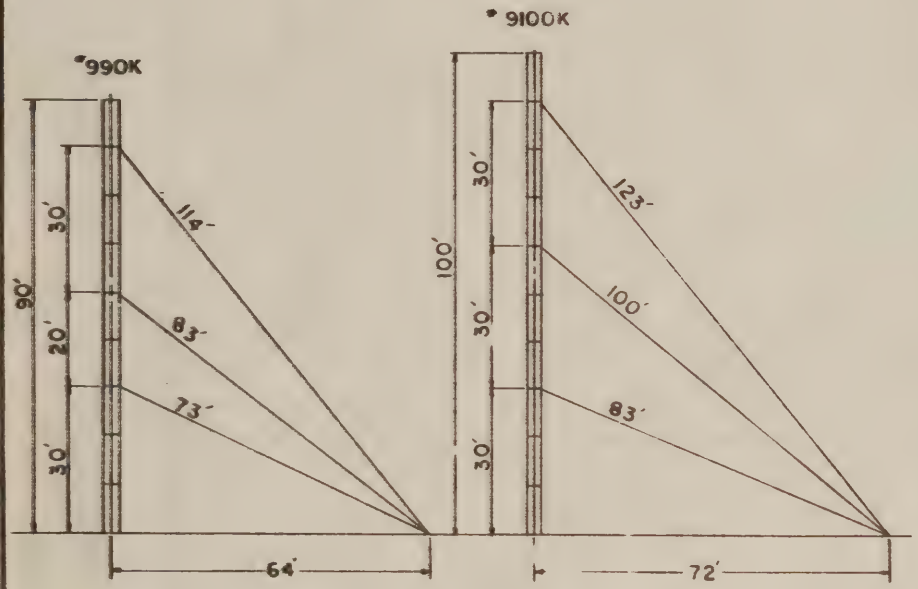
NOTE: All guy wire is 1/8" 1 x 19 Aircraft type Galvanized, breaking strength 2,100 lbs.

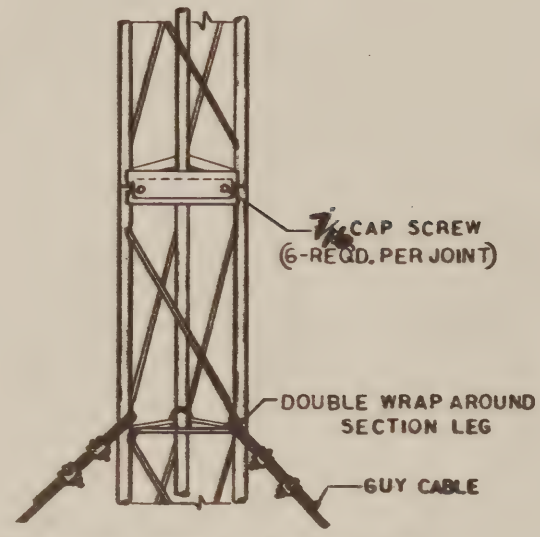
Optional Guying Accessories available from our General Catalog including Earth Screw Anchors, Triangular guypoint plate, etc.

Tri-Ex TOWER CORP.
7182 RASMUSSEN AVE., VISALIA, CALIF.

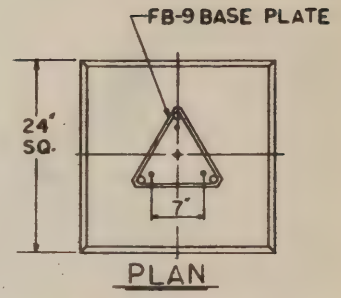


GUYING PLAN

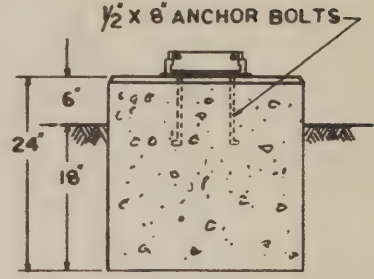




TYPICAL JOINT & GUY DETAIL



PLAN



BASE DETAIL

NOTES

1. GUY LENGTHS AS SHOWN ALLOW FOR END CONNECTIONS AND SAG. TYPICAL INSTALLATIONS ASSUME TOWER BASE AND ANCHORS AT SAME GROUND ELEVATIONS.
2. ALLOWABLE LOAD CENTERED AT 2 FT. ABOVE TOP OF TOWER IS 3.5 SQ. FT. OF PROJECTED AREA IN 86MPH WIND LOAD.
3. TENSION GUYS TO 8% OF THEIR ULTIMATE STRENGTH.

TRI-EX TOWER CORPORATION

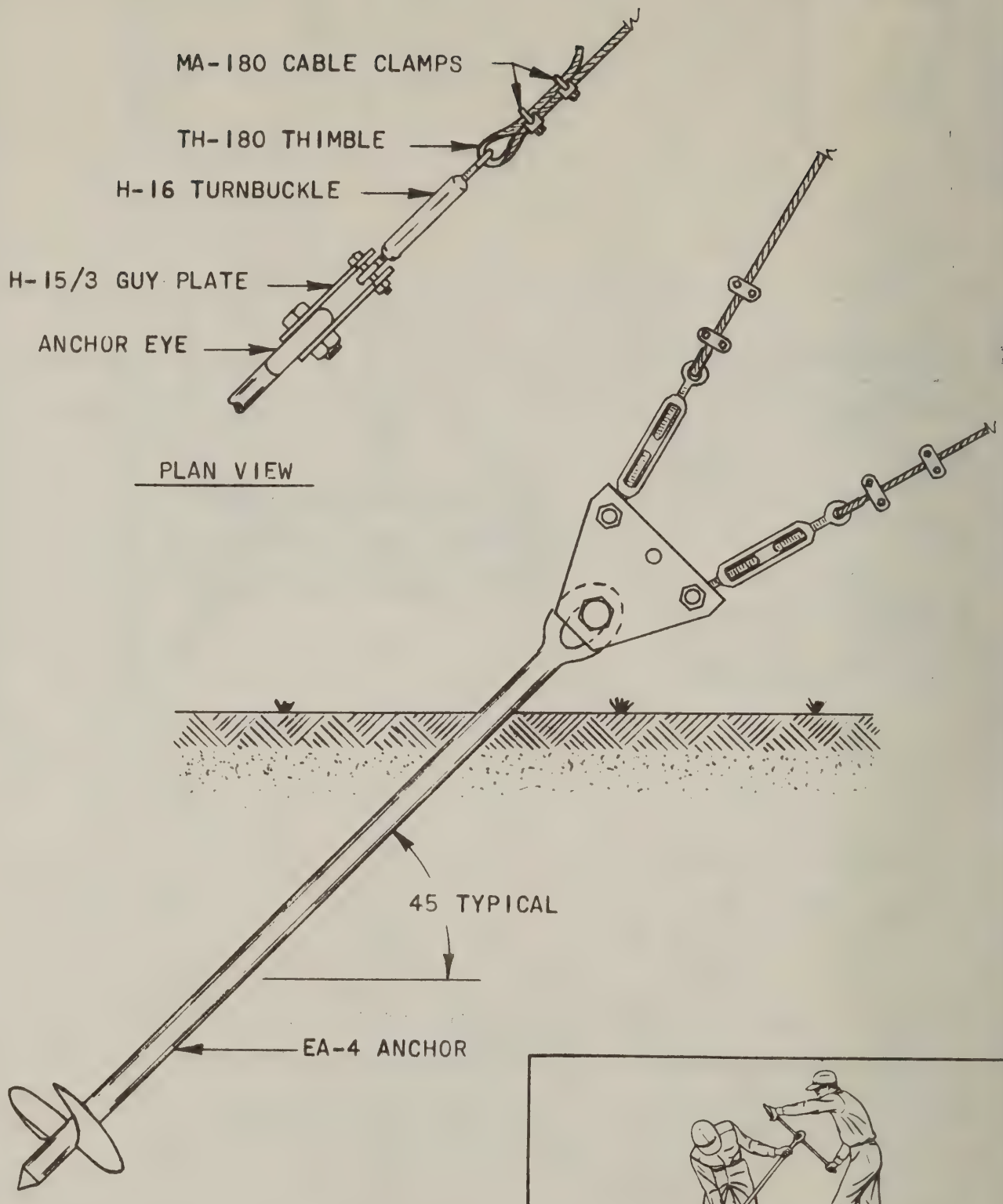
SCALE:	APPROVED BY:	DRAWN BY
DATE: 3/31/68		REVISED J.P.

INSTALLATION DETAILS

MODEL T-9 TOWER KITS

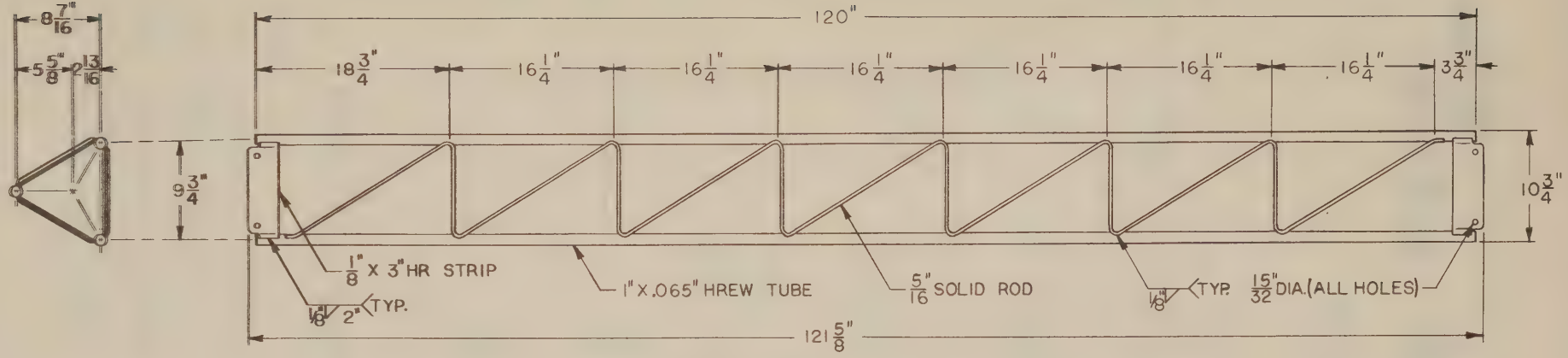
DRAWING NUMBER C-100-005

REF. NO. EA

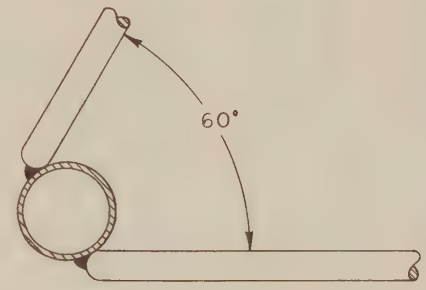


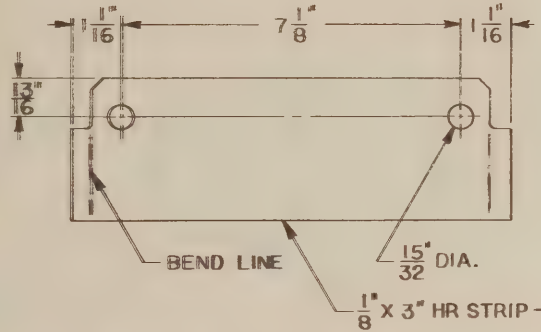
It takes only two men to install the anchor

Tri-Ex TOWER CORPORATION 7182 RASMUSSEN AVE., VISALIA, CALIF.	TITLE: TYPICAL SCREW ANCHOR INSTALLATION	ISSUE: A/10/71 SHEET NO. 02

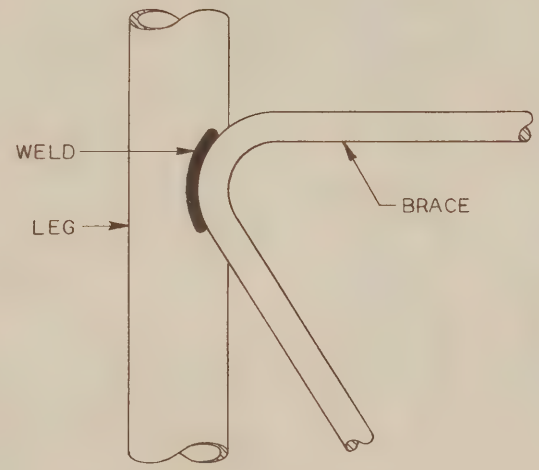


SECTION DETAIL





JOINT STRAP DETAIL



BRACE CONNECTION DETAIL

TOWER SPECIFICATIONS		
SECTION NO.		T-9
C. TO C. OF LEGS		9 3/4"
SECTION LENGTH		120"
WEIGHT OF SECTION		40 LB.
LEG SIZE		1" X .065" HREW TUBE
LEG CROSS SECTION AREA		.1909 SQ. IN.
KL/R OF LEG		39.2
RAD. GY. TOWER		3.98"
MOMENT	EIA	2,584 K-FT
	UBC	3.446 K-FT
TOWER AREA PER LINEAL FT.	EIA	.213 SQ. FT.
	UBC	.283 SQ. FT.

TRI-EX TOWER CORPORATION

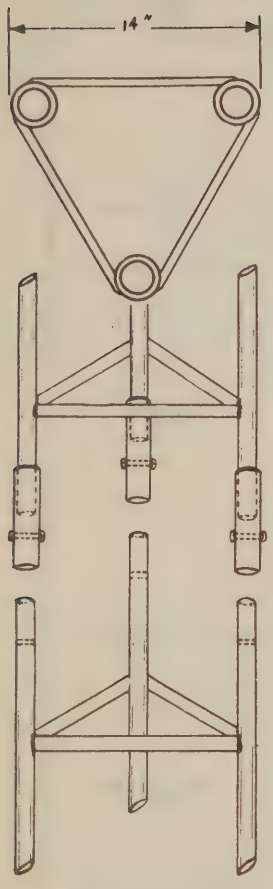
SCALE:	APPROVED BY:	DRAWN BY R.C.
DATE: 9-20-71		REVISED 5-15-72

MODEL T-9 SECTION

DRAWING NUMBER C-009-010-001

Tri-Ex 10 "SERIES" TOWER

STURDY ECONOMY MODEL



DESIGN

Heavy wall tubular sleeves welded to upright members to prevent collapsing of tube when tightening bolt. Hi-strength 3/8" steel bolts used throughout. You get ten feet of tower height with each section.

CONSTRUCTION

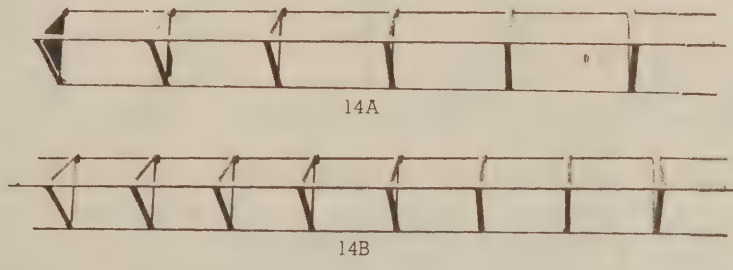
Uprights of Hi-strength 1" O.D. heavy steel tubing. Cross bracing of die formed steel strip. Electric welded for maximum rigidity.

EASY ERECTION

No trained workmen required for fast, easy installation. First section is set in concrete or on Model 14C Concrete base. May be mounted on roff or flat surface with Model 14F or 14D base mounts.

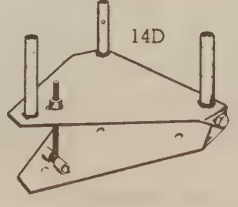
ONLY TWO SECTIONS TO STOCK

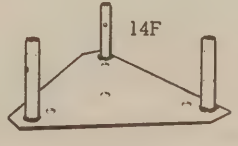
Number 14A top section and 14B standard section. This enables you to assemble towers from ten to one hundred twenty feet when properly guyed.



TRI-EX "10 SERIES" TOWER

Model		Weight	Length
14A	Top Section (2" I.D.)	45 lbs.	10'-4"
14B	Standard Section	36 lbs.	10'-4"
14C	Concrete Base Mount	15 lbs.	4'-0"
14D	Adjustable Roof Mount	16 lbs.	
14E	Erection Fixture	18 lbs.	14'-0"
14F	Flat Steel Base Mount	10 lbs.	



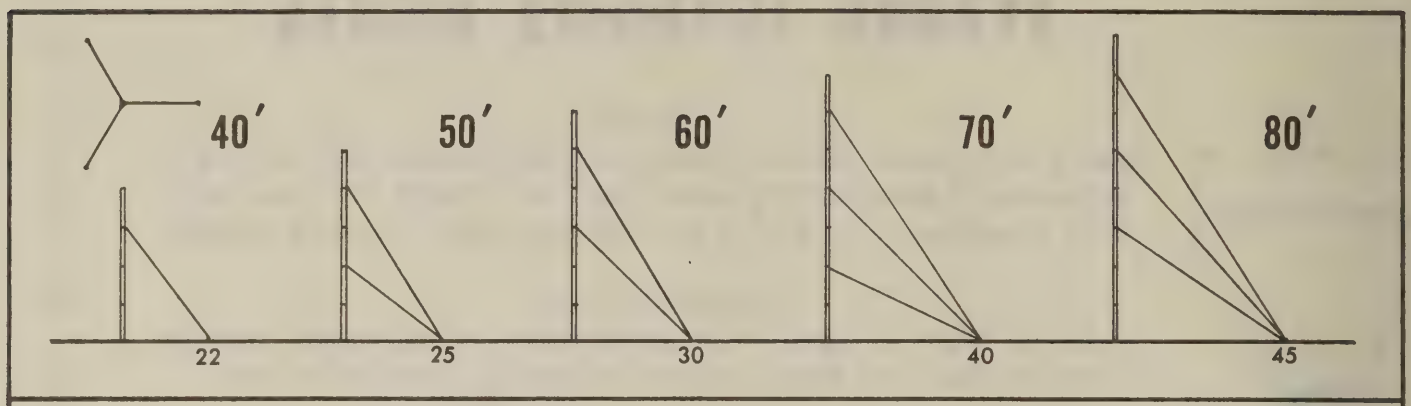


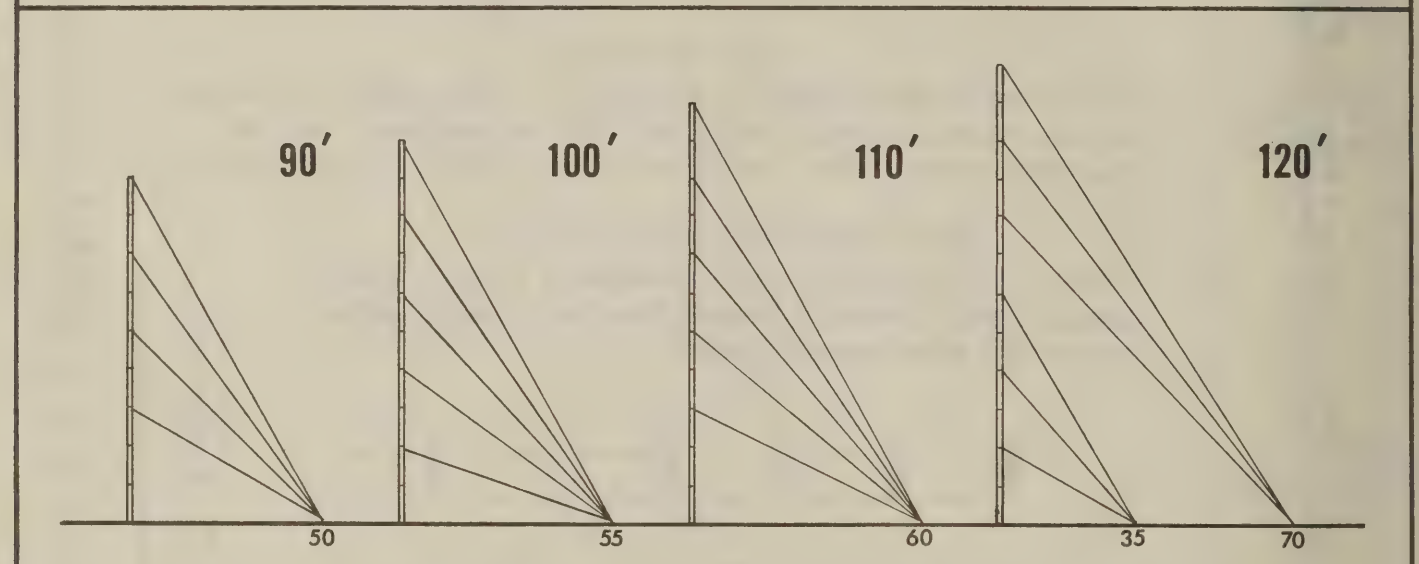
All TOWERS GALVANIZED

Tri-Ex TRI-EX 10 TOWER KITS

CONTAINS EVERYTHING NEEDED FOR COMPLETE

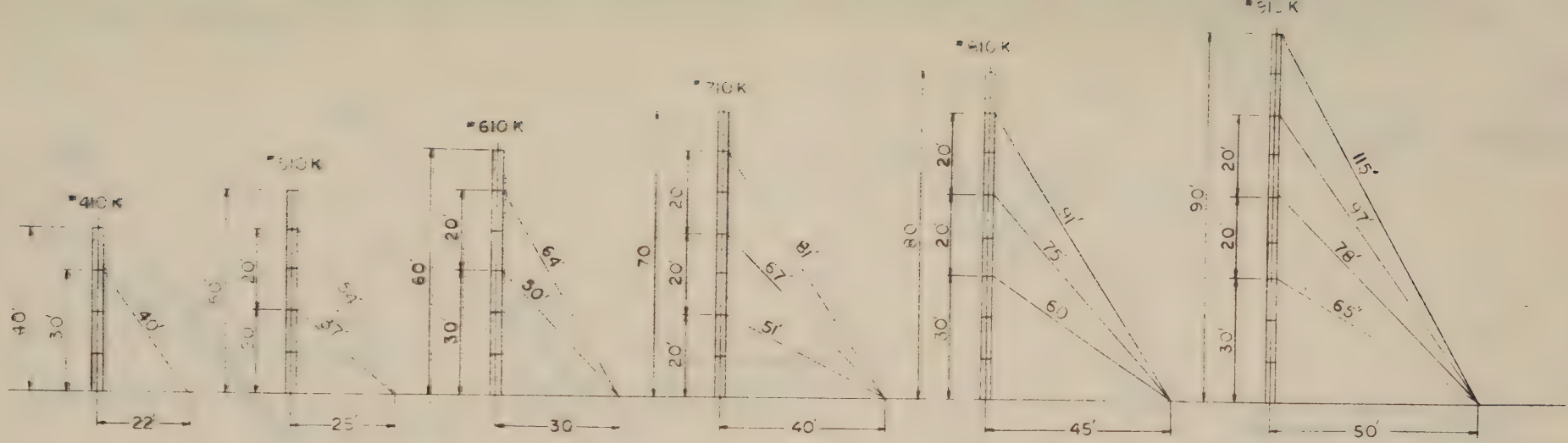
TOWER INSTALLATION

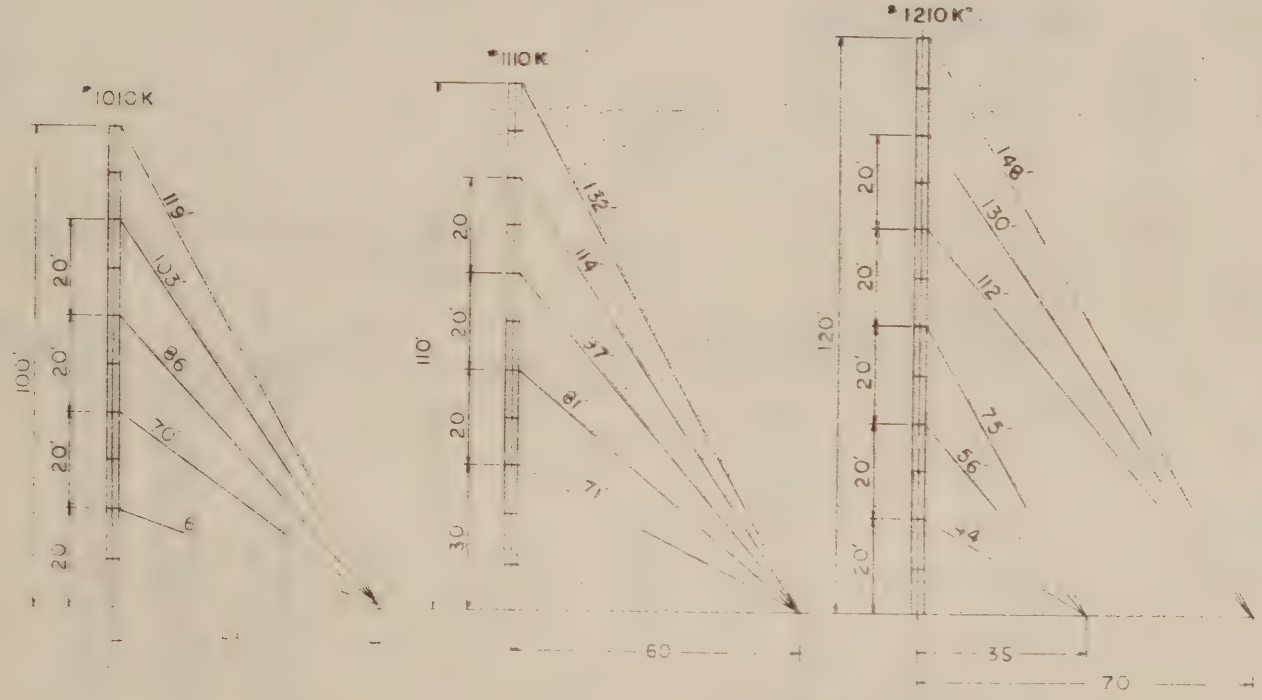




KIT MODEL	TOWER HEIGHT	GUY WIRE		CLAMPS		THIMBLES	TURNBUCKLES		ANCHORS	
		1/8"	5/32"	MA-180	MA-316	TH-316	H-16	DFT-386	EA-4	EA-6
410K	40 ft.	120 ft.		12		3	3		3	
510K	50 ft.	300 ft.		24		6	6		3	
610K	60 ft.	370 ft.		24		6	6		3	
710K	70 ft.	620 ft.		36		9	9		3	
810K	80 ft.	750 ft.		36		9	9		3	
910K	90 ft.	1010 ft.		48		12	12			3
1010K	100 ft.		1320 ft.		60	15		15		3
1110K	110 ft.		1500 ft.		60	15		15		3
1210K	120 ft.		1700 ft.		72	18		18		6

NOTE: IN ADDITION TO THE ITEMS LISTED ABOVE, ALL KITS CONTAIN THE FOLLOWING; (1) AD-50 MAST, 2" O.D. x 5 FEET, (3) H-15 GUY PLATES.





NOTES

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2. ALLOWABLE LOAD CENTERED AT 2 FT. ABOVE TOP OF TOWERS IS 5 SQ. FT. OF PROJECTED AREA IN 86 MPH WIND LOAD.
3. TENSION GUYS TO 8% OF THEIR ULTIMATE STRENGTH.

GUYING PLAN

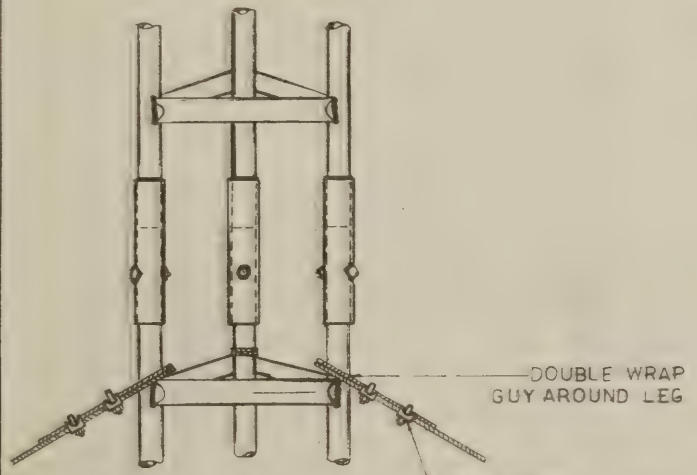
TRI-EX TOWER CORPORATION

SCALE —	APPROVED BY	DRAWN BY JP
DATE 7/24/69		REVISED

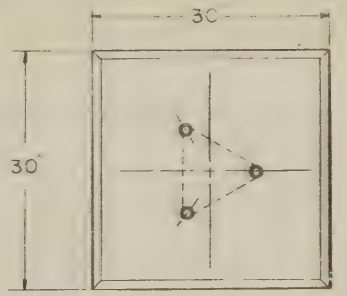
INSTALLATION DETAILS

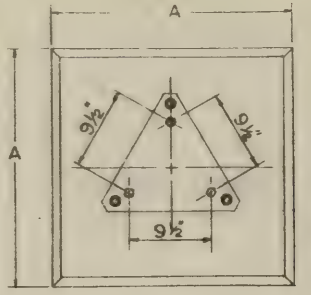
TRI-EX 10" TOWER KITS

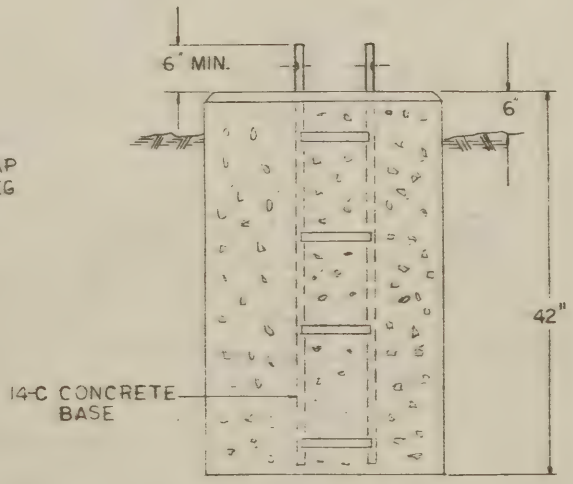
DRAWING NUMBER 2-100-010-



GUY CONNECTION AT TOWER

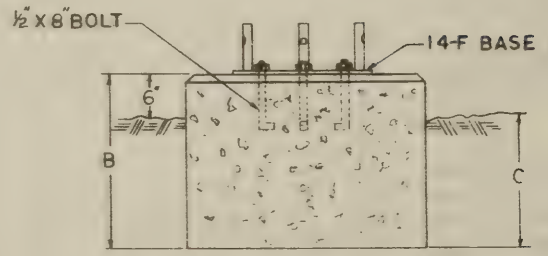






14-C BASE DETAIL

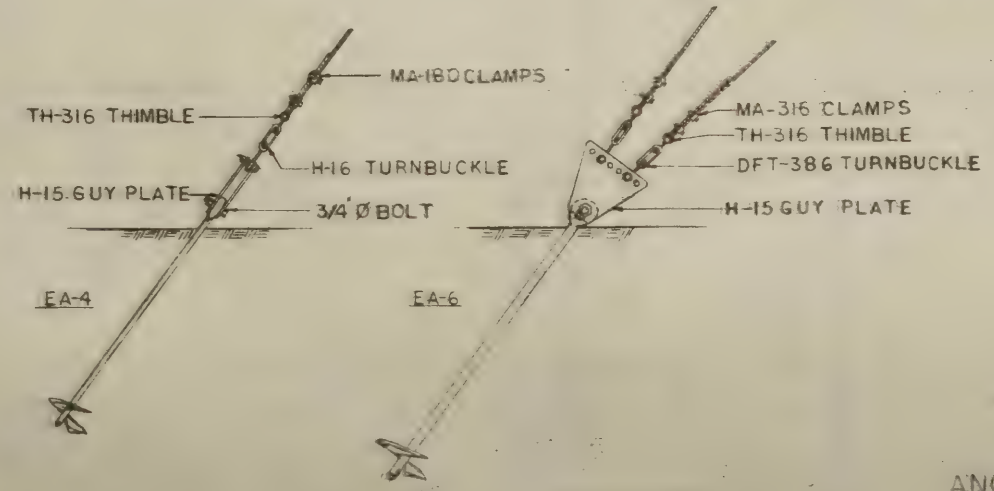
CONC. REQD.: 0.8 CU. YD.



14-F BASE DETAIL

TOWER HT.	A	B	C
40' TO 60'	18" SQ.	18"	12"
70' TO 100'	24" SQ.	18"	12"
110' TO 120'	30" SQ.	24"	18"

NOTE:
IF SUBJECT TO FREEZING GROUND CONDITIONS, EXTEND FOOTINGS A MIN. OF 6" BELOW FROST LINE.



SCREW ANCHORS

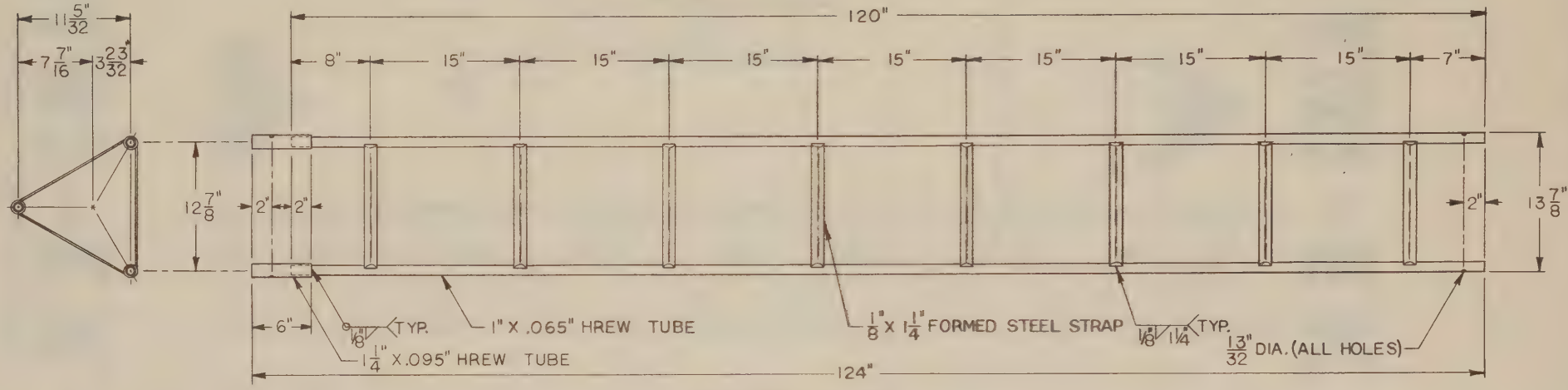
ANCHOR INSTALLATION

TRI-EX TOWER CORPORATION

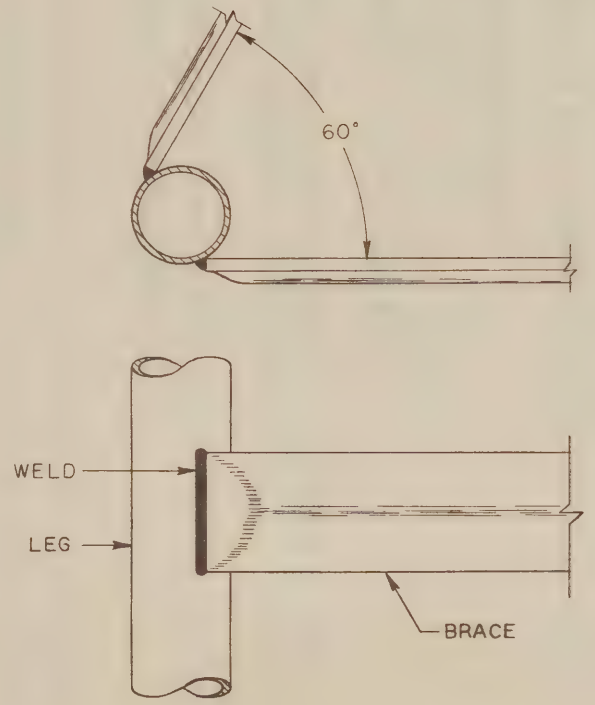
SCALE:	APPROVED BY:	DRAWN BY JP
DATE 3/25/69		REVISED

INSTALLATION DETAILS

DRAWING NUMBER



SECTION DETAIL



BRACE CONNECTION DETAIL

TOWER SPECIFICATIONS		
SECTION NO.		T-10
C TO C OF LEGS		12 7/8"
SECTION LENGTH		120"
WEIGHT OF SECTION		36 LB.
LEG SIZE		1"X.065" HREW TUBE
LEG CROSS SECTION AREA		.1909 SQ. IN.
KL/R OF LEG		37.4
RAD. GY. TOWER		5.26"
MOMENT	EIA	3.44 K-FT
	UBC	4.59 K-FT
TOWER AREA PER LINEAL FT.	EIA	.297 SQ. FT.
	UBC	.395 SQ. FT.

TRI EX TOWER CORPORTION

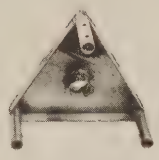
SCALE:	APPROVED BY:	DRAWN BY R.C.
DATE: 9-16-71		REVISED 5-15-72

MODEL T-10 SECTION

"MODEL 14-B" — DRAWING NUMBER C-010-010-001

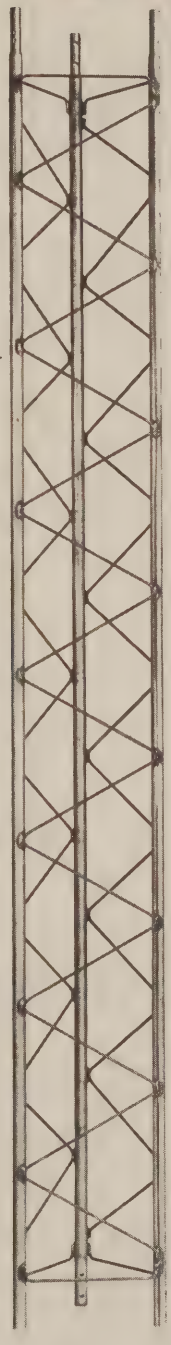
MODEL FIFTEEN
TRIANGULAR GUYED TOWER

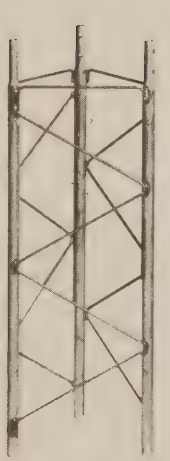
TRI-EX



TOP PLATE

• 10-FOOT SECTION →





CONCRETE BASE

BASE PLATE

NEW DESIGN ELIMINATES TOP AND BASE SECTIONS

- GENERAL PURPOSE COMMUNICATIONS TOWER. (VHF, UHF, MICROWAVE, AND TWO-WAY)
- AVAILABLE IN HEIGHTS FROM 10 FT. TO 300 FT. (ALWAYS REFER TO EXACT INSTALLATION DATA)
- DESIGNED AND FABRICATED FOR THE TOUGH JOBS WHICH CALL FOR LOW COST AND BRUTE STRENGTH.
- UTILIZES SUPERIOR "W" BRACING CONFIGURATION. RESISTS CLOCKWISE AND COUNTER-CLOCKWISE TORSIONAL LOADS.
- GENERAL DIMENSIONS:
  FACE WIDTH - - 13⅞"
  SIDE RAILS - - - - 1¼" O. D. X .083" WALL.
  BRACING - - - - - 5/16" SOLID ROD.
- GREATER STRENGTH AND LOADING CAPABILITIES UNHEARD OF IN THE ECONOMICAL TOWER CLASS.
- COMPARE CONSTRUCTION DETAILS AND YOU WILL SEE THE BIG ADVANTAGE OF THE MODEL "15"

CONSTRUCTION: Built in precision jigs and electrically welded by certified personnel.

FINISH: Hot dip galvanized after fabrication.

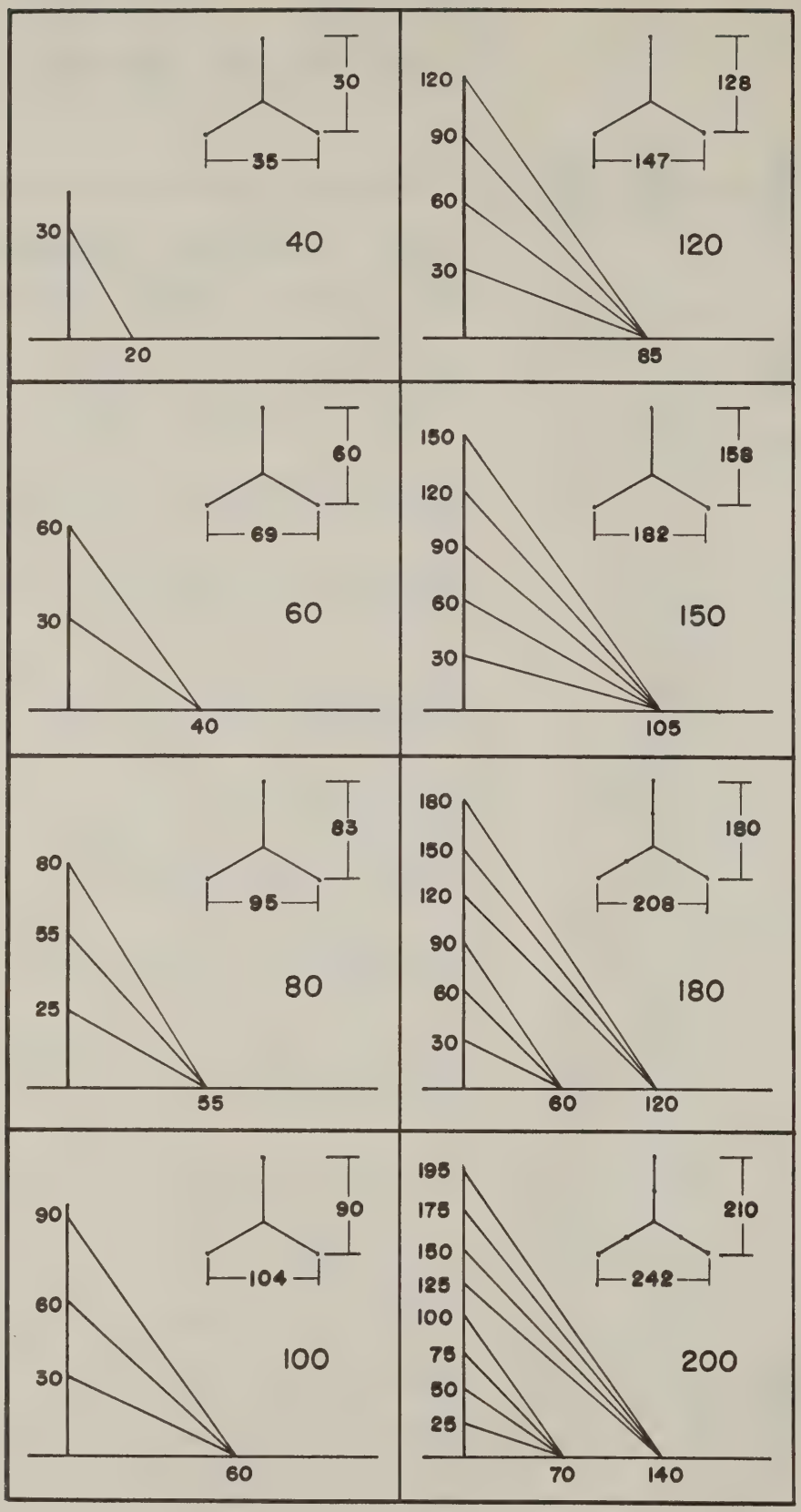
WEIGHT: 50 lbs. (per section)

JOINTS: Swedged interlock. No jamming during installation.

TRI-EX

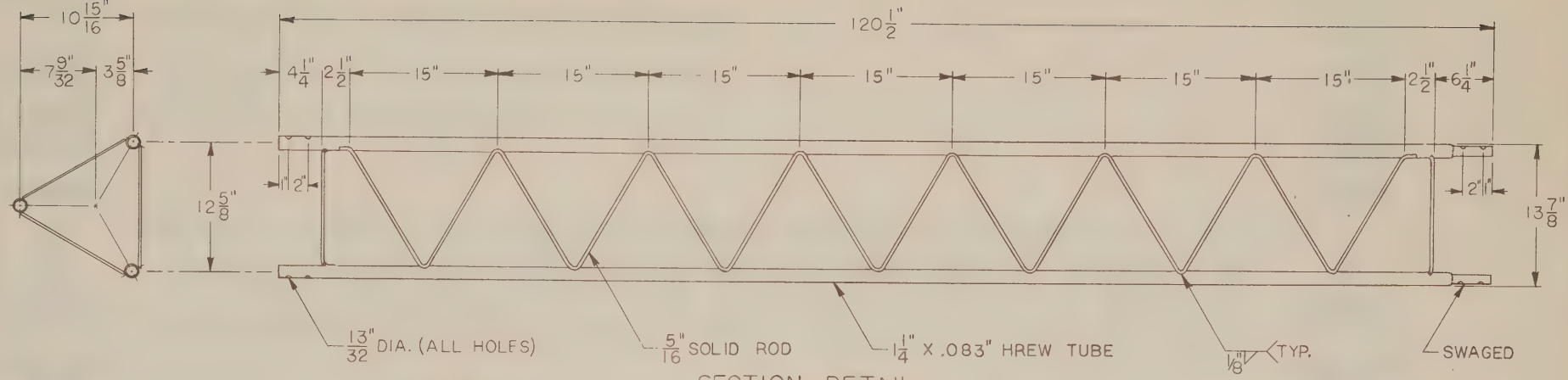
TOWER CORPORATION

TYPICAL INSTALLATIONS

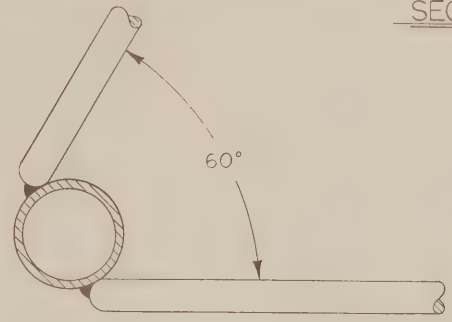


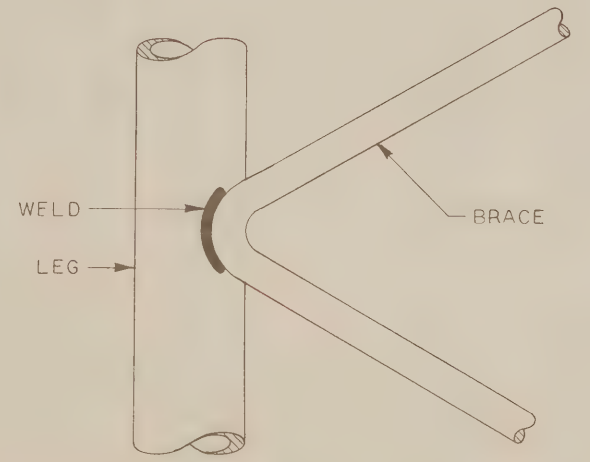
Tri-Ex TOWER CORPORATION

7182 RASMUSSEN AVE., VISALIA, CALIF. 93277



SECTION DETAIL





BRACE CONNECTION DETAIL

TOWER SPECIFICATIONS		
SECTION NO.		T-15
C TO C OF LEGS		12 5/8"
SECTION LENGTH		120 1/2"
WEIGHT OF SECTION		50 LB.
LEG SIZE		1 1/4" X .083" HREW TUBE
LEG CROSS SECTION AREA		.3043 SQ. IN.
KL/R OF LEG		29
RAD GY TOWER		5.13"
MOMENT	EIA	5.55 K-FT
	UBC	7.39 K-FT
TOWER AREA PER LINEAL FT.	EIA	.260 SQ. FT.
	UBC	.346 SQ. FT.

TRI-EX TOWER CORPORATION

SCALE: ——— APPROVED BY: DRAWN BY R.C.

DATE: 9-16-71 REVISED 5-15-72

MODEL T-15 SECTION

DRAWING NUMBER C-015-010-001

17X22 PRINTED ON NO. 1000H CLEARPRINT

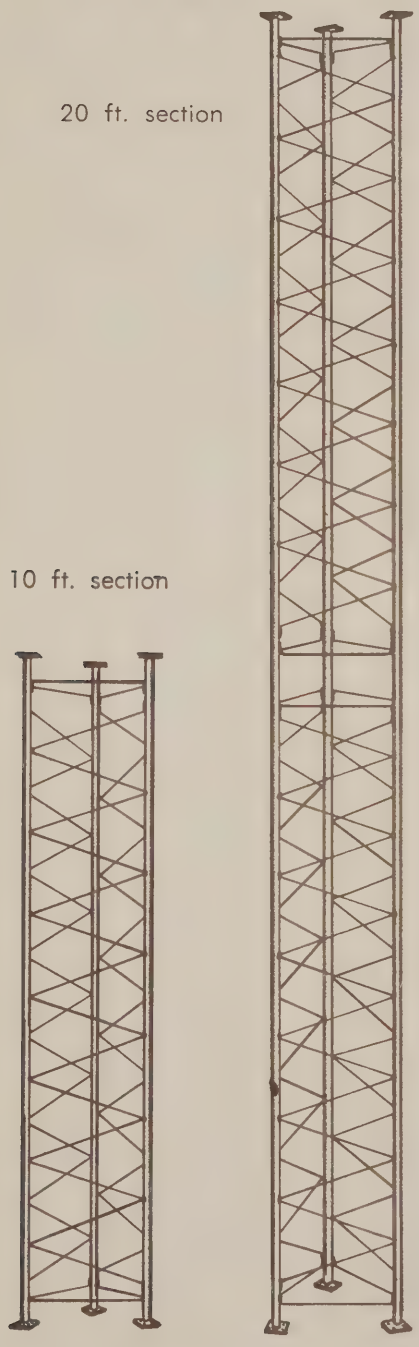
MODEL TWENTY
TRIANGULAR GUYED TOWER

TRI-EX

COMMUNICATION TOWER

20 ft. section

10 ft. section



- AVAILABLE IN HEIGHTS FROM 10 FT. TO 400 FT.
- UTILIZES SUPERIOR "W" BRACING CONFIGURATION WHICH RESISTS TORSIONAL LOADS.
- GENERAL DIMENSIONS:

  FACE WIDTH -- 19 13/16"
  SIDE RAILS ----1 1/2" x .120" WALL
  BRACING ------ 7/16" SOLID ROD
- APPLICATIONS:

  ANTENNA RADIATOR - INSULATED BASE AVAILABLE, MICROWAVE SUPPORT, VHF-UHF TRANSMITTING ANTENNA SUPPORT AND TROPO SCATTER SYSTEMS.
- DESIGNED FOR TRULY DIFFICULT AND DEMANDING JOBS. UTILIZING A LOW WIDTH "W" BRACING CONFIGURATION YOU OBTAIN TOWER STABILITY NOT FOUND IN SIMILAR TOWERS.

CONSTRUCTION: Built in precision jigs and electrically welded by certified personnel.

FINISH: Hot dip galvanized after fabrication.

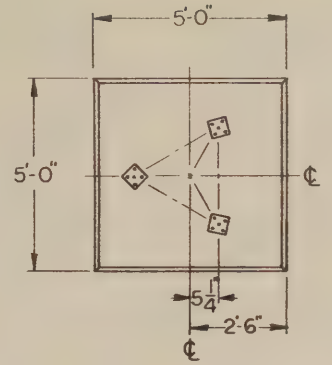
WEIGHT: 205 lbs. 20 ft. section
107 lbs. 10 ft. section

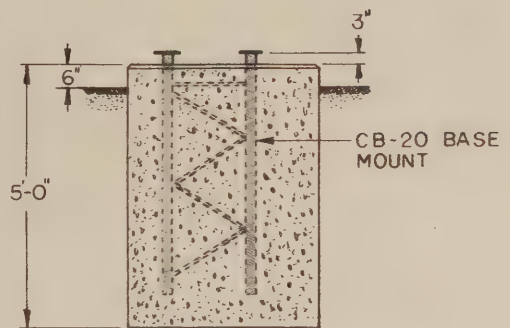
JOINTS: Square heavy duty easily aligned flanges.

TRI-EX
TOWER CORPORATION

T-20 SERIES

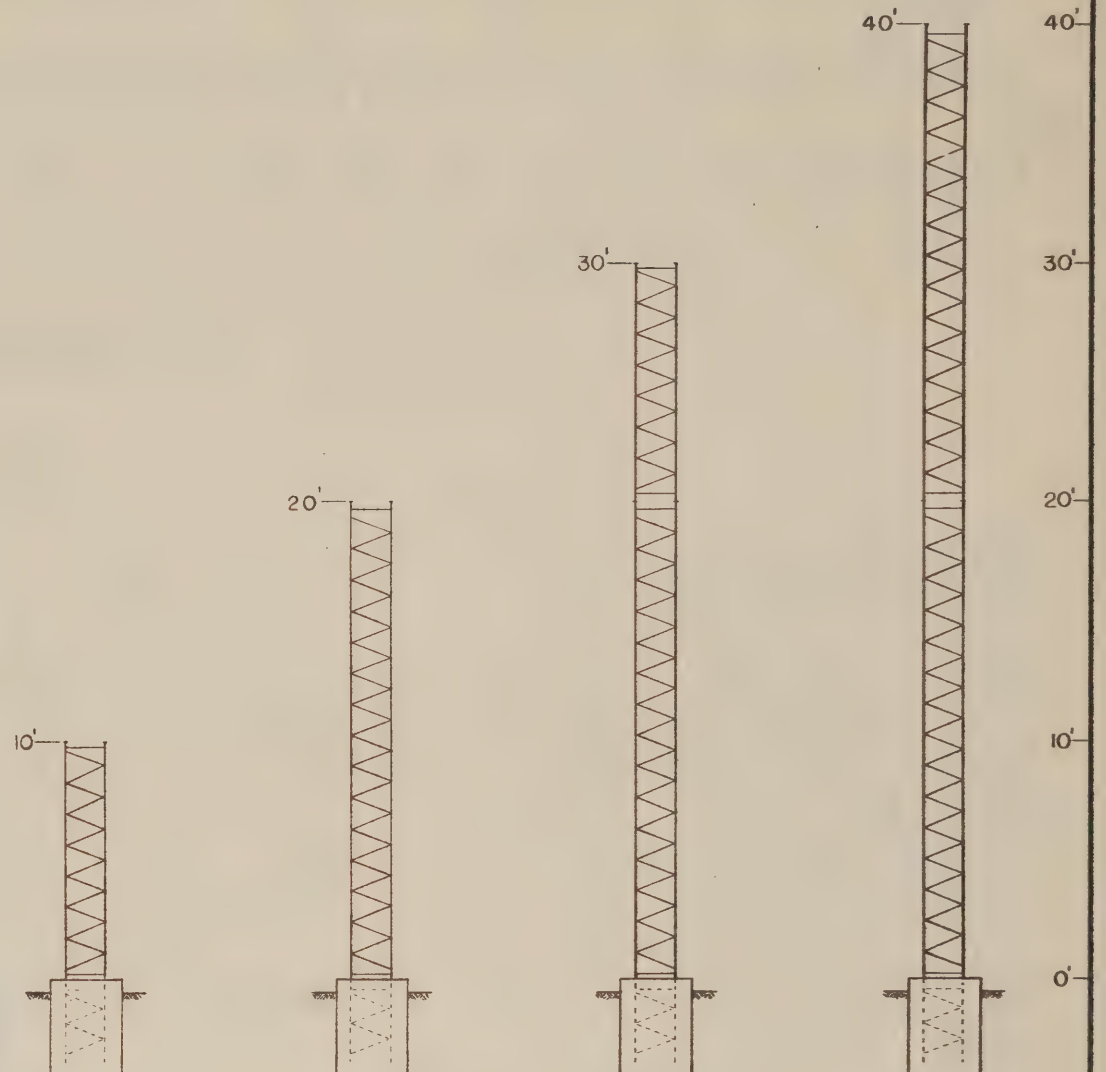
Model No.	Description	Weight
T-20-1	Ten Foot Section (.120" wall)	107
T-20-2	Twenty Foot Section (.120" wall)	205
CB-20	Concrete Base Mount	52
FB-20	Flat Base Mount	60
BP-20	Beacon Mounting Plate	22
TC-20	Top Cap Plates (Set of 3)	2
TB-20	Taper Base Mount (30" high)	41
GB-20/TB	Guy Bracket W/Torque Bars	29
TA-20	Torque Arm Assembly	47
DSM-20	Side Dish Mount	72





BASE FOOTING

(CONCRETE REQ'D: 4.7 CU. YD.)



MODEL	30#	40#	50#
T-20	44	33	26

30#	40#	50#
20	14	11

30#	40#	50#
10	6	4

30#	40#	50#
4	2	0

NOTE:
THE NUMBERS LISTED DIRECTLY BELOW EACH TOWER HEIGHT INDICATE THE MAXIMUM ALLOWABLE WIND LOAD AREA IN SQUARE FEET THAT CAN BE MOUNTED AT THE TOWER APEX.

EIA SPECIFICATIONS
30 PSF. . . 86.6 MPH
40 PSF. . . 100.0 MPH
50 PSF. . . 111.8 MPH

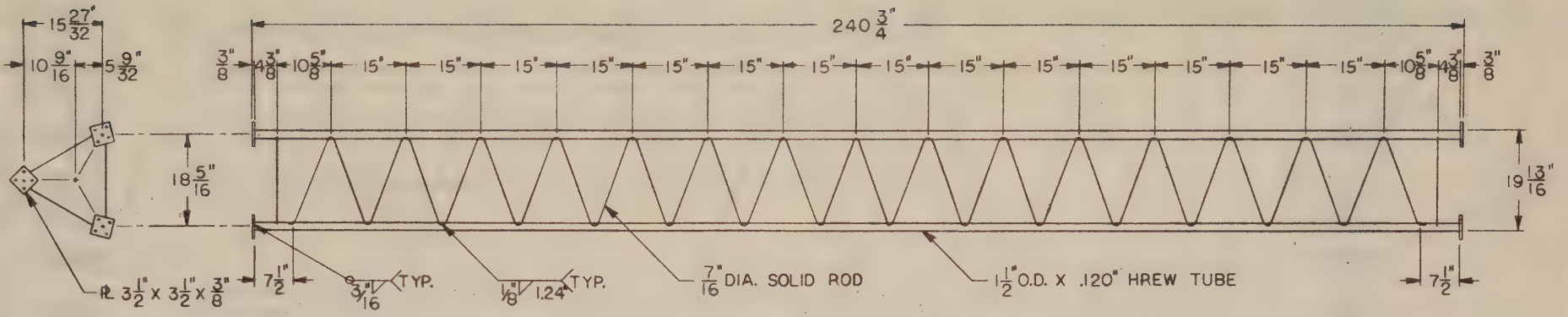
TRI-EX TOWER CORPORATION

SCALE: —— APPROVED BY: DRAWN BY R.C.
DATE: 3/21/72 REVISED

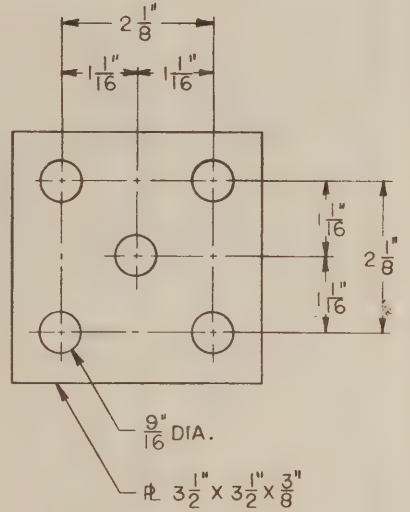
MODEL T-20 SERIES S.S. TOWERS

DRAWING NUMBER C-020-000-00

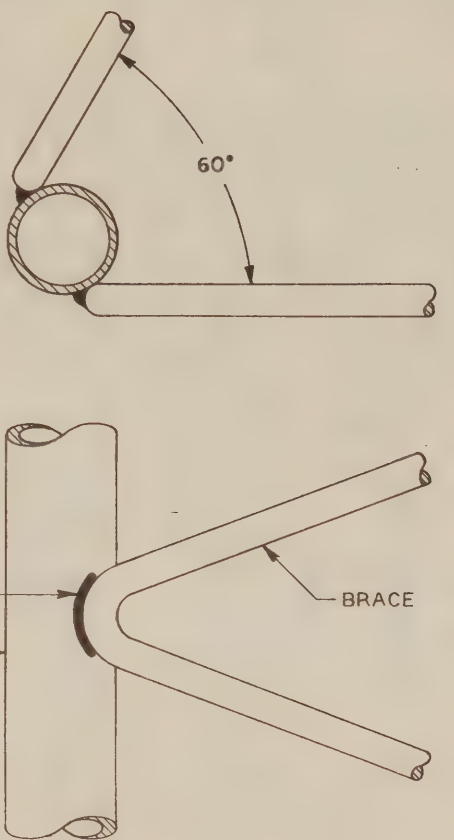
17X22 PRINTED ON NO. 1000H CLEARPRINT



SECTION DETAIL



FLANGE DETAIL



BRACE CONNECTION DETAIL

TOWER SPECIFICATIONS		
SECTION NO.		T-20
C. TO C. OF LEGS		18 5/16"
SECTION LENGTH		240 3/4"
WEIGHT OF SECTION		205 LB.
LEG SIZE		1 1/2" X .120" HREW TUBE
LEG CROSS SECTION AREA		.5202 SQ. IN.
KL/R OF LEG		24.5
RAD. GY. TOWER		7.5"
MOMENT	EIA	13.97 K-FT
	UBC	18.66 K-FT
TOWER AREA PER LINEAL FT.	EIA	.346 SQ. FT.
	UBC	.461 SQ. FT.

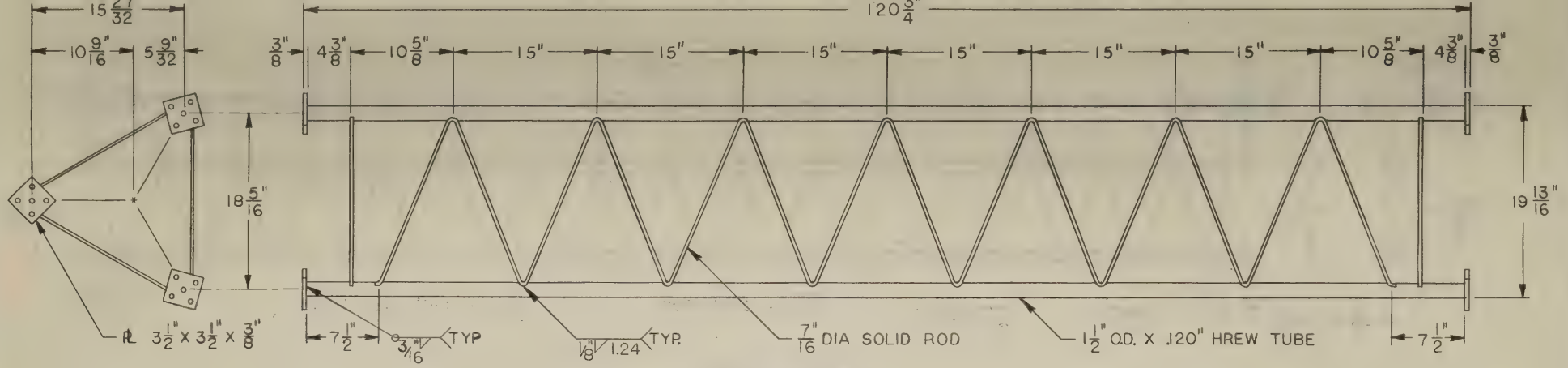
TRI-EX TOWER CORPORATION

SCALE:	APPROVED BY:	DRAWN BY R.C.
DATE: 8-31-71		REVISED 5-15-72

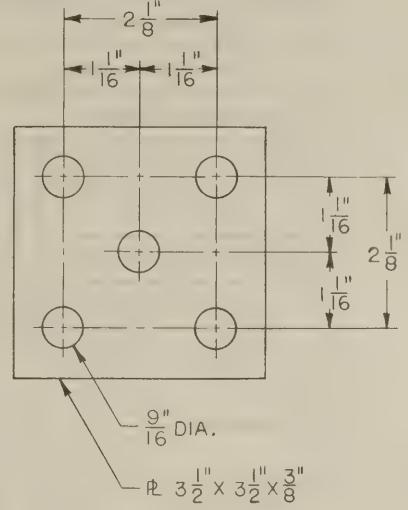
MODEL T-20 SERIES SECTION

"20 FEET" — DRAWING NUMBER C-020-020-001

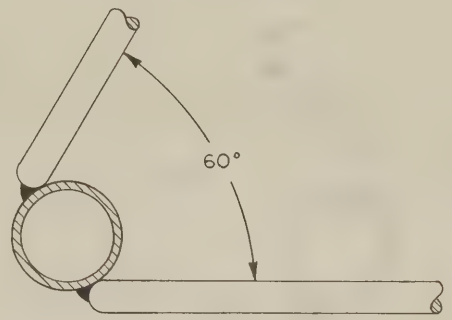
17282 PRINTED ON NO. 1000H CLEARPRINT

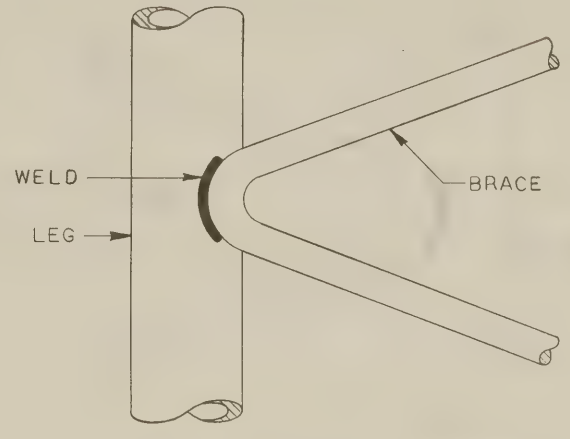


SECTION DETAIL



FLANGE DETAIL





BRACE CONNECTION DETAIL

TOWER SPECIFICATIONS		
SECTION NO.		T-20
C. TO C. OF LEGS		18 5/16"
SECTION LENGTH		120 3/4"
WEIGHT OF SECTION		104 LB.
LEG SIZE		1 1/2" X .120" HREW TUBE
LEG CROSS SECTION AREA		.5202 SQ. IN.
KL/R OF LEG		24.5
RAD. GY. TOWER		7.5"
MOMENT	EIA	13.97 K-FT
	UBC	18.66 K-FT
TOWER AREA PER LINEAL FT.	EIA	.346 SQ. FT.
	UBC	.461 SQ. FT.

TRI-EX TOWER CORPORATION

SCALE: ——— APPROVED BY: DRAWN BY R.C.

DATE: 9-10-71 REVISED 5-15-72

MODEL T-20 SERIES SECTION

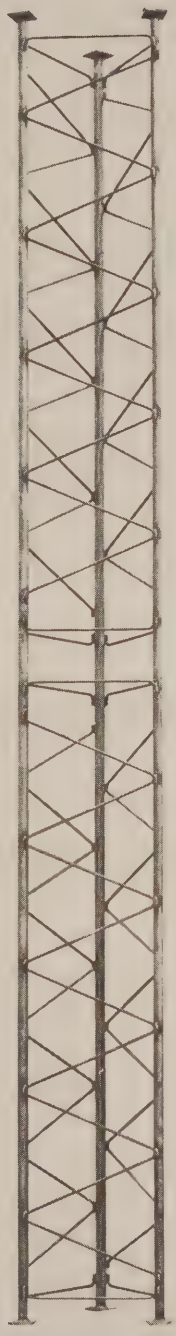
"10 FEET" DRAWING NUMBER C-020-010-001

17X28 PRINTED ON NO. 1000H CLEARPRINT

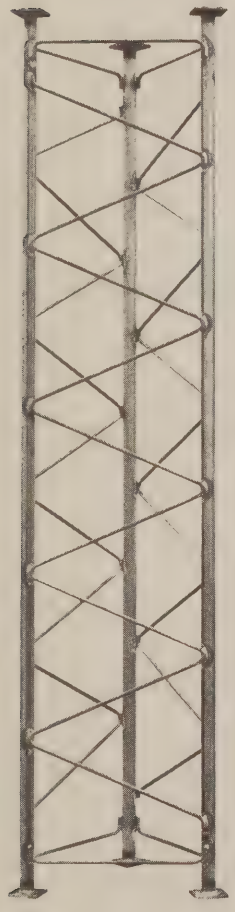
MODEL TWENTY-SIX
TRIANGULAR GUYED TOWER

TRI-EX

20 ft. section



10 ft. section



COMMUNICATION TOWER

- AVAILABE IN HEIGHTS FROM 10 FT. TO 600 FT.
  (TO 400 FEET WITH EXCELLENT RIGIDITY)
- UTILIZES SUPERIOR "W" BRACING CONFIGURATION. ..RESISTS TORSIONAL CLOCKWISE AND COUNTER-CLOCKWISE LOADS.
- GENERAL DIMENSIONS:
  FACE WIDTH - 26 5/16"
  SIDE RAILS - - - 2" x VARIABLE WALL THICKNESS
  BRACING - - - ⅝" SOLID ROD
- APPLICATIONS:
  ANTENNA RADIATOR - INSULATED BASE AVAILABLE, HIGH RIGIDITY MICROWAVE SUPPORT, VHF - UHF TRANSMITTING ANTENNA SUPPORT, AND TROPO SCATTER SYSTEMS.
- DESIGNED FOR TRULY DIFFICULT AND DEMANDING JOBS. UTILIZING A LOW WIDTH "W" BRACING CONFIGURATION YOU OBTAIN TOWER STABILITY NOT FOUND IN SIMILAR TOWERS.
- CONTACT YOUR LOCAL REPRESENTATIVE FOR FULL ENGINEERING DATA, OR WRITE DIRECT TO: SALES ENGINEERING DEPT.

CONSTRUCTION: Built in precision jigs and electrically welded by certified personnel.

FINISH: Hot dip galvanized after fabrication.

WEIGHT: 400 lbs. average 20 ft. section
200 lbs. average 10 ft. section

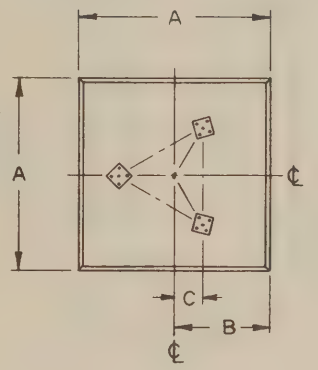
JOINTS: Square heavy duty easily aligned flanges.

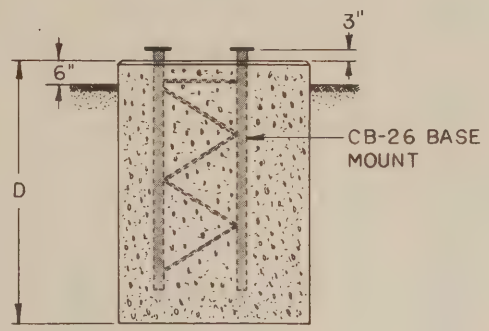
TRI-EX

TOWER CORPORATION ·

T-26 SERIES

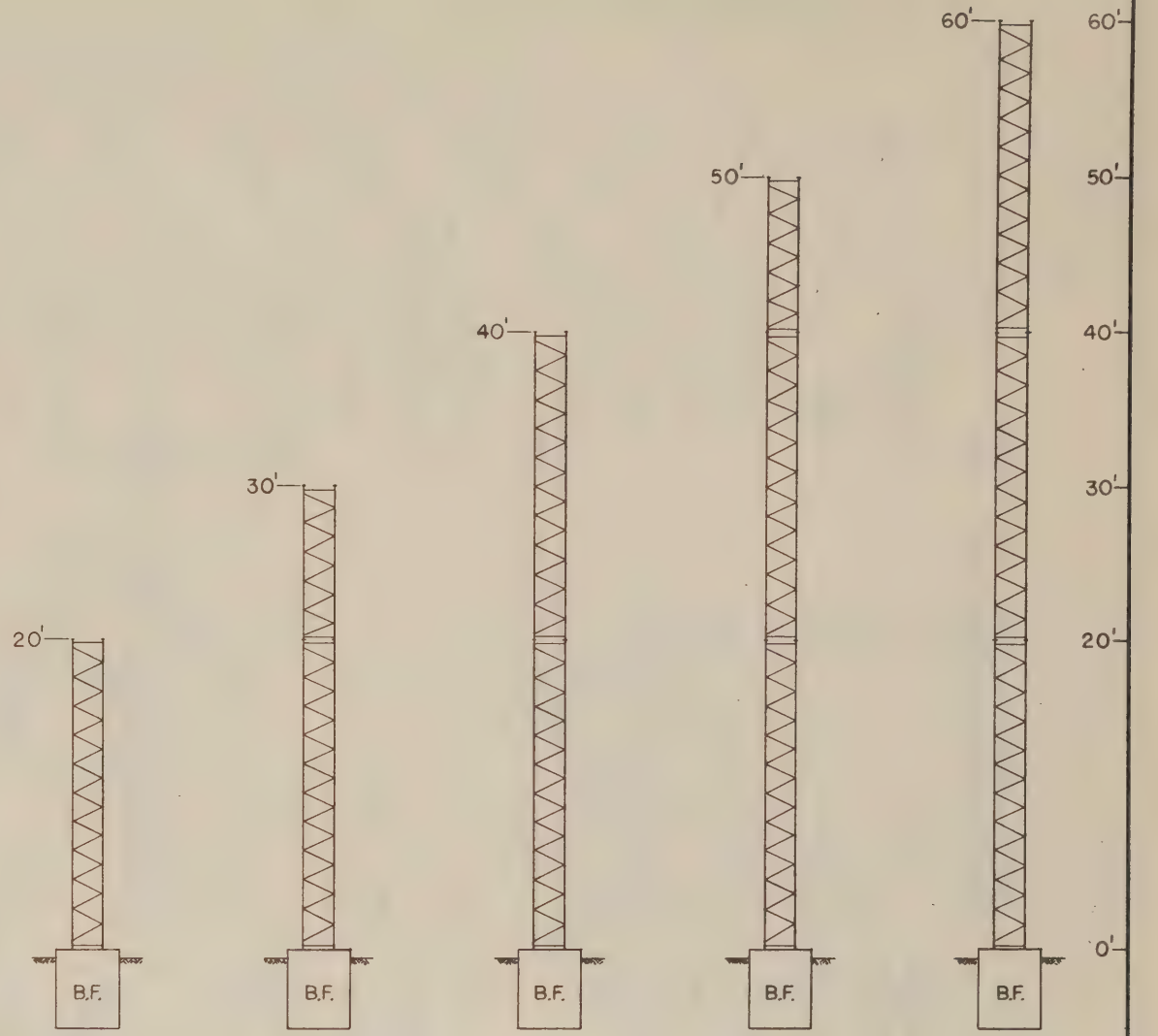
Model No.	Description	Weight
T-26-1 (12)	Ten Foot Section (.120" wall)	170
T-26-2 (12)	Twenty Foot Sect. (.120" wall)	320
T-26-1 (18)	Ten Foot Section (.180" wall)	205
T-26-2 (18)	Twenty Foot Sect. (.180" wall)	400
T-26-1 (25)	Ten Foot Section (.250" wall)	232
T-26-2 (25)	Twenty Foot Sect. (.250" wall)	455
CB-26	Concrete Base Mount	85
FB-26	Flat Base Mount	90
BP-26	Beacon Mounting Plate	30
TC-26	Top Cap Plates (Set of 3)	3
TB-26	Taper Base Mount (36" high)	60
GB-26/TB	Guy Bracket W/Torque Bars	38
TA-26	Torque Arm Assembly	82
DSM-26	Side Dish Mount	75





BASE FOOTING

BASE FOOTING (B.F.) CHART					
B.F. NO.	A	B	C	D	CONCRETE
1	5'-9"	2'-10 1/2"	7"	5'-0"	6.2 CU. YD.
2	6'-6"	3'-3"	7"	5'-0"	7.9 CU. YD.
3	7'-0"	3'-6"	7"	5'-0"	9.1 CU. YD.



MODEL	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	BF
T-26-12	36	26	20	1	21	14	10	1	11	6	4	1	5	1	0	1	0	0	0	—
T-26-18	54	39	30	2	32	22	16	2	20	13	8	2	12	6	2	2	6	1	0	2
T-26-25	73	54	42	3	45	32	24	3	29	20	14	3	19	12	7	3	12	6	2	3

NOTE:
THE NUMBERS LISTED DIRECTLY BELOW EACH TOWER HEIGHT INDICATE THE MAXIMUM ALLOWABLE WIND LOAD AREA IN SQUARE FEET THAT CAN BE MOUNTED AT THE TOWER APEX.

EIA SPECIFICATIONS
30 PSF . . . 86.6 MPH
40 PSF . . . 100.0 MPH
50 PSF . . . 111.8 MPH

TRI-EX TOWER CORPORATION

SCALE: ——— APPROVED BY: DRAWN BY R.C.
DATE: 3/20/72 REVISED

MODEL T-26 SERIES S.S. TOWERS

DRAWING NUMBER C-026-000-001

17X22 PRINTED ON NO. 1000H CLEARPRINT

MODEL T-26-12 SERIES TOWERS
SELF-SUPPORTING TOWER KITS

TOWER HEIGHT	SHIPPING WEIGHT
20 FT.	425 LB.
30 FT.	595 LB.
40 FT.	745 LB.
50 FT.	915 LB.

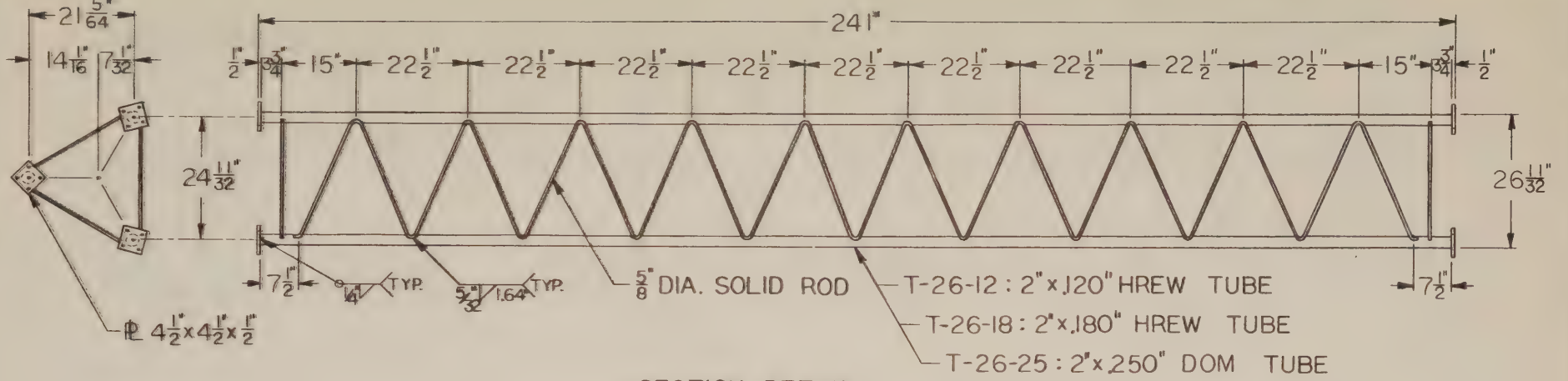
MODEL T-26-18 SERIES TOWERS
SELF-SUPPORTING TOWER KITS

20 FT.	505 LB.
30 FT.	710 LB.
40 FT.	905 LB.
50 FT.	1110 LB.
60 FT.	1305 LB.

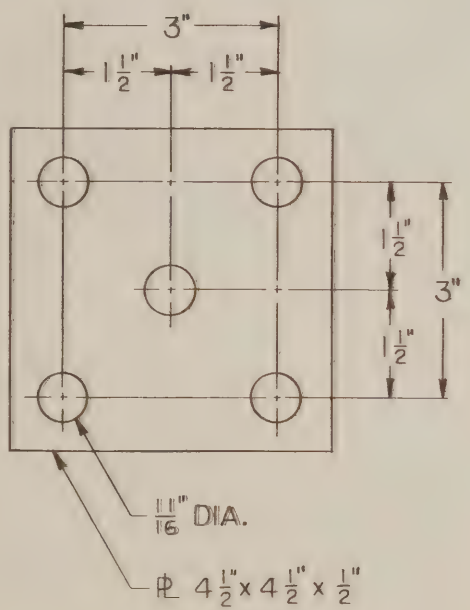
MODEL T-26-25 SERIES TOWERS
SELF-SUPPORTING TOWER KITS

20 FT.	560 LB.
30 FT.	790 LB.
40 FT.	1015 LB.
50 FT.	1245 LB.
60 FT.	1470 LB.

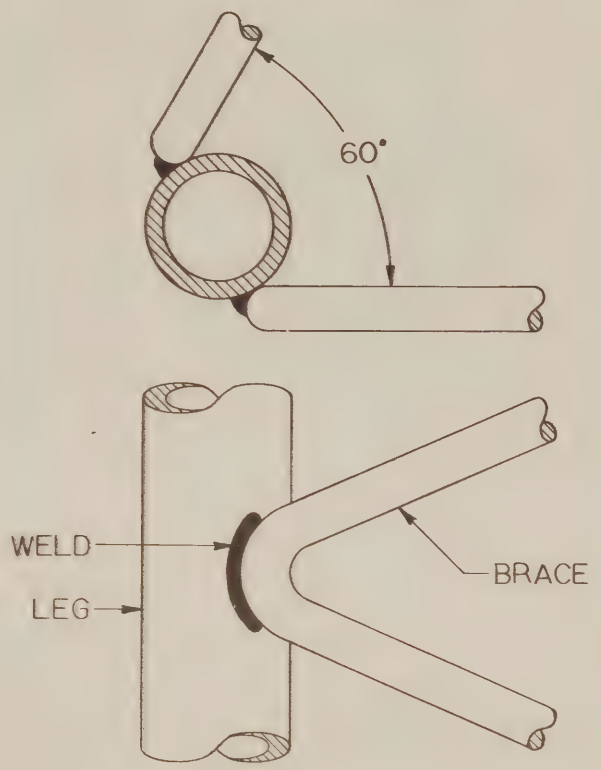
TOWERS COMPLETE WITH TOP CAPS, BASE MOUNT AND GROUNDING KIT.



SECTION DETAIL



FLANGE DETAIL



BRACE CONNECTION DETAIL

TOWER SPECIFICATIONS				
SECTION NO.		T-26-12	T-26-18	T-26-25
C. TO C. OF LEGS		24 11/32"	24 11/32"	24 11/32"
SECTION LENGTH		241"	241"	241"
WEIGHT OF SECTION		320 LB.	400 LB.	470 LB.
LEG SIZE		2" X .120" HREW TUBE	2" X .180" HREW TUBE	2" X .250" DOM TUBE
LEG CROSS SECTION AREA		.7087 SQ.IN.	1.029 SQ.IN.	1.374 SQ.IN.
KL/R OF LEG		27.0	27.9	28.8
RAD. GY. TOWER		9.95"	9.95"	9.95"
MOMENT	EIA	25.07 K-FT	36.32 K-FT	48.33 K-FT
	UBC	33.43 K-FT	48.41 K-FT	64.42 K-FT
TOWER AREA PER LINEAL FOOT	EIA	.46 SQ.FT.	.46 SQ.FT.	.46 SQ.FT.
	UBC	.61 SQ. FT.	.61 SQ. FT.	.61 SQ. FT.

TRI-EX TOWER CORPORATION

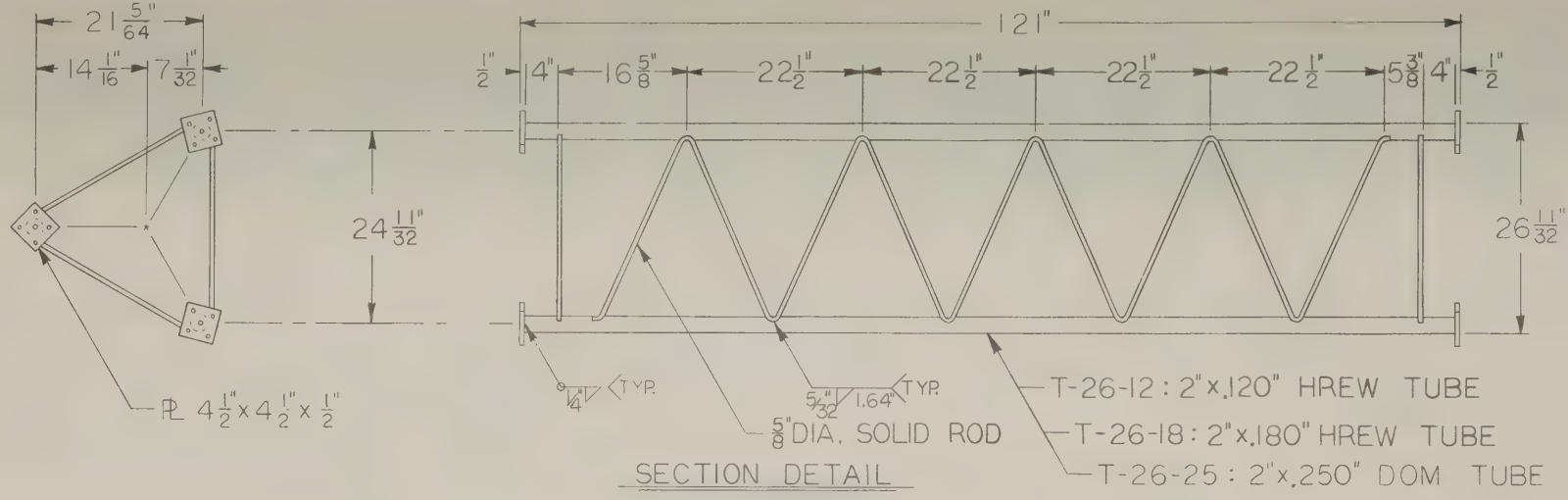
SCALE:	APPROVED BY:	DRAWN BY R C
DATE: 8-25-71		REVISED 5-15-72

MODEL T-26 SERIES SECTION

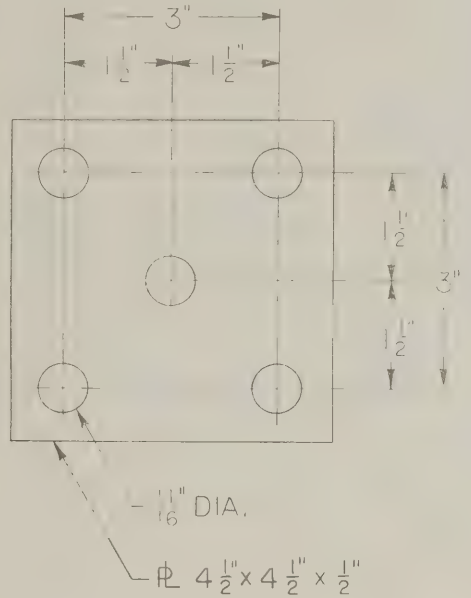
"20 FEET"

DRAWING NUMBER C-026-241-001

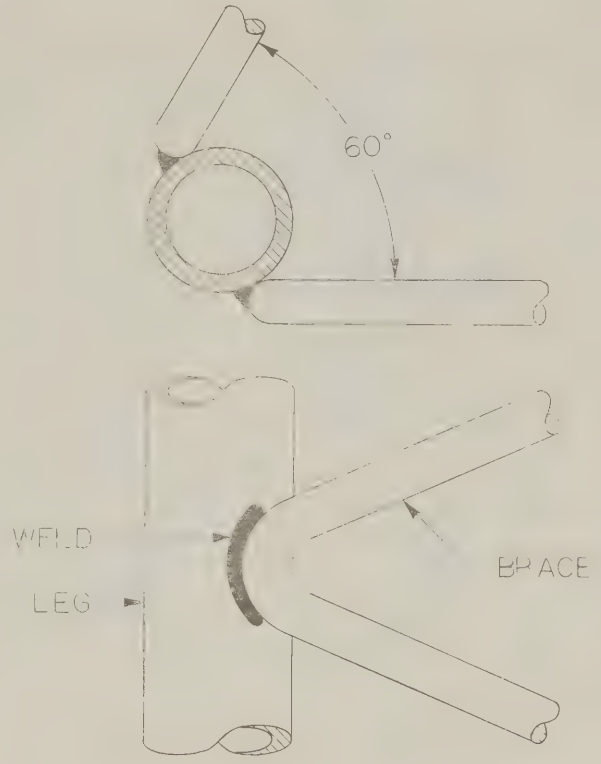
17222 PRINTED ON NO. 1000H CLEARPRINT



SECTION DETAIL



FLANGE DETAIL



BRACE CONNECTION DETAIL

TOWER SPECIFICATIONS				
SECTION NO.		T-26-12	T-26-18	T-26-25
C. TO C. OF LEGS		24 11/32"	24 11/32"	24 11/32"
SECTION LENGTH		121"	121"	121"
WEIGHT OF SECTION		160 LB.	200 LB.	235 LB.
LEG SIZE		2" X .120" HREW TUBE	2" X .180" HREW TUBE	2" X .250" DOM TUBE
LEG CROSS SECTION AREA		.7087 SQ. IN.	1.029 SQ. IN.	1.374 SQ. IN.
KL/R OF LEG		27.0	27.9	28.3
R=D. GY. TOWER		9.95"	9.95"	9.95"
MOMENT	EIA	25.07 K-FT	36.32 K-FT	48.33 K-FT
	UBC	33.43 K-FT	48.41 K-FT	64.42 K-FT
TOWER AREA PER LINEAL FOOT	EIA	.46 SQ.FT.	.46 SQ.FT.	.46 SQ.FT.
	UBC	.61 SQ. FT.	.61 SQ. FT.	.61 SQ.FT.

TRI-EX TOWER CORPORATION

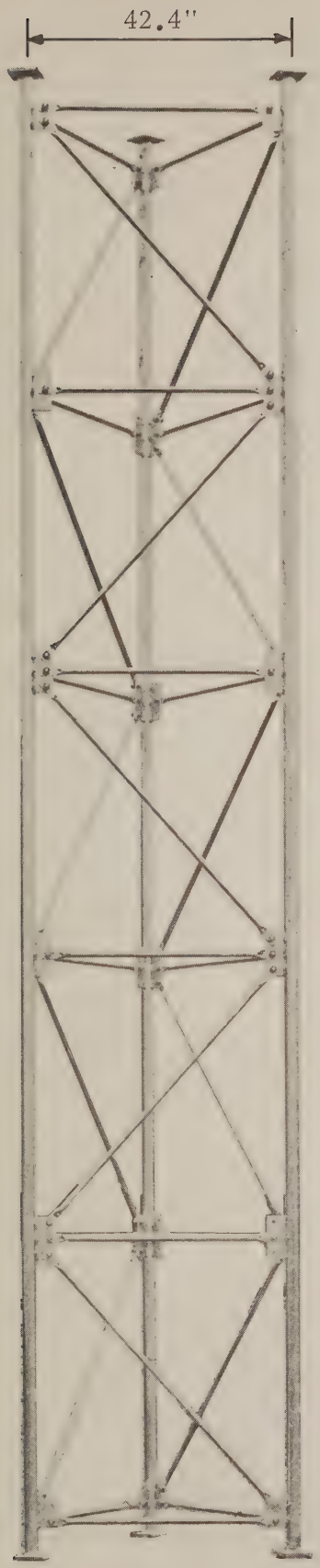
SCALE	APPROVED BY.	DRAWN BY R.C.
DATE: 8-27-71		REVISED 5-15-72

MODEL T-26 SERIES SECTION

"10 FEET"

DRAWING NUMBER C-026-121-002

17X22 PRINTED ON NO. 1000H CLEARPRINT



20 FOOT SECTION

New.... Tri-Ex®

MODEL THIRTY-SIX

COMMUNICATION TOWER

DESIGNED SPECIFICALLY FOR MICROWAVE AND HEAVY DUTY COMMUNICATIONS INSTALLATIONS

- CONSTRUCTION:

  THE NO. 36 SERIES TOWER IS CONSTRUCTED IN AN EQUILATERAL TRIANGLE WITH TUBULAR STEEL LEGS AND CROSS-BRACING. THE CROSS-SECTION SIZE IS 42.2" ON LEG CENTERS. DIAMETER OF LEG SECTIONS VARY FROM 2.4" TO 2.8" TO MEET INSTALLATION REQUIREMENTS. CROSS-BRACING IS BOLTED TO LEGS WITH H.S. BOLTS.

- FINISH:

  ALL TOWER COMPONENTS ARE COMPLETELY HOT-DIPPED GALVANIZED AFTER FABRICATION.

- APPLICATIONS:

  DESIGNED FOR LARGE GUYED COMMUNICATIONS USES; MICROWAVE, CATV, AM-FM BROADCAST... ALSO FOR SELF-SUPPORTING INSTALLATIONS UP TO 80 FEET.

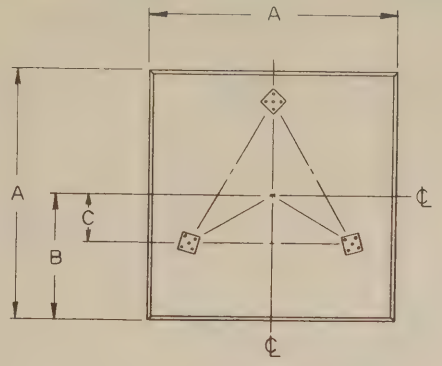
- MODELS:

SECTION NUMBER	SECTION WEIGHT
T-36	400 LBS.
T-36H	575 LBS.
T-36EH	700 LBS.

Tri-Ex® TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

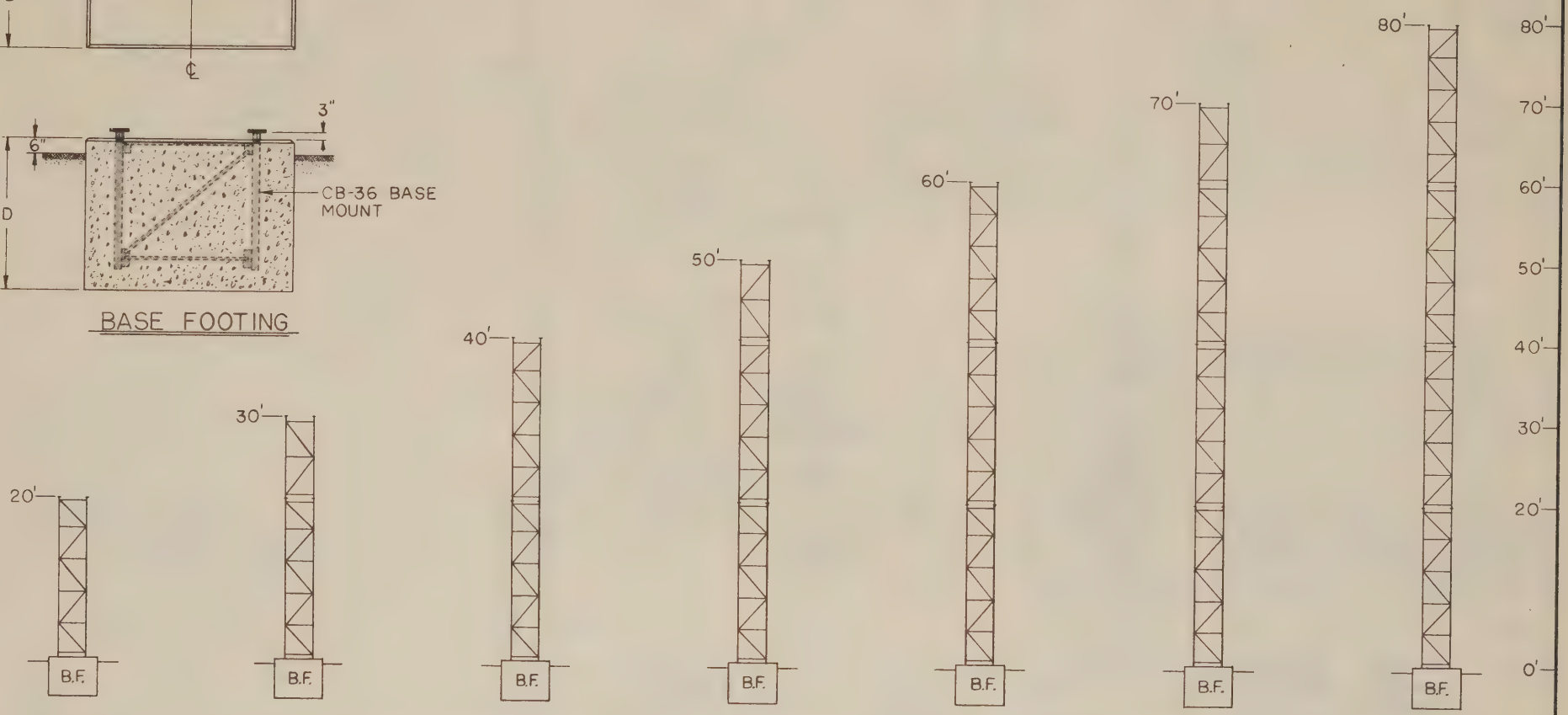
T-36 SERIES

Model No.	Description	Weight
T-36	Standard 20 Foot Section	400
T-36H	Heavy Duty 20 Foot Section	575
T-36EH	Extra Heavy 20 Foot Section	700
T-36-9	Standard 9 Foot Section	190
T-36H-9	Heavy Duty 9 Foot Section	266
T-36EH-9	Extra Heavy 9 Foot Section	325
CB-36	Concrete Base Mount	180



BASE FOOTING (B.F.) CHART					
B.F. NO.	A	B	C	D	CONCRETE
1	7'-6"	3'-9"	12 7/32"	4'-9"	10.0 CU. YD.
2	9'-0"	4'-6"	12 7/32"	4'-9"	14.5 CU. YD.
3	10'-0"	5'-0"	12 7/32"	5'-0"	19.0 CU. YD.

BASE FOOTING



MODEL	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.
T-36	96	71	55	1	59	42	31	1	38	25	18	1	24	14	8	1	14	5	0	1	6	0	0	1	0	0	0	—
T-36H	160	119	93	2	100	72	56	2	68	47	34	2	47	31	21	2	32	18	11	2	21	8	1	2	9	0	0	2
T-36EH	212	158	126	3	135	99	77	3	95	67	51	3	69	47	34	3	50	31	22	3	35	20	10	3	23	10	1	3

NOTE:
THE NUMBERS LISTED DIRECTLY BELOW EACH TOWER HEIGHT INDICATE THE MAXIMUM ALLOWABLE WIND LOAD AREA IN SQUARE FEET THAT CAN BE MOUNTED AT THE TOWER APEX.

EIA SPECIFICATIONS
30 PSF . . . 86.6 MPH
40 PSF . . . 100.0 MPH
50 PSF . . . 111.8 MPH

TRI-EX TOWER CORPORATION

SCALE: —— APPROVED BY: DRAWN BY R.C.
DATE: 3/20/72 REVISED

MODEL T-36 SERIES S.S. TOWERS

DRAWING NUMBER C-036-000-001

17238 PRINTED ON NO. 1000H CLEARPRINT

MODEL T-36 SERIES TOWERS
SELF-SUPPORTING TOWER KITS

TOWER HEIGHT	SHIPPING WEIGHT
20 FT.	600 LB.
30 FT.	790 LB.
40 FT.	1000 LB.
50 FT.	1190 LB.
60 FT.	1400 LB.
70 FT.	1590 LB.

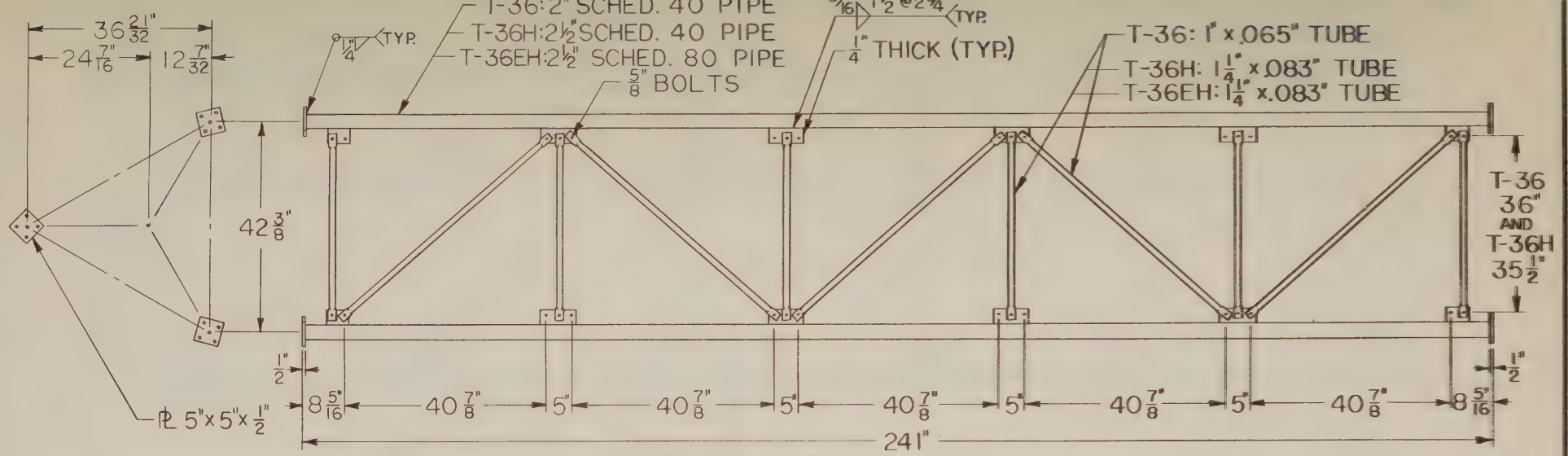
MODEL T-36H SERIES TOWERS
SELF-SUPPORTING TOWER KITS

20 FT.	775 LB.
30 FT.	1040 LB.
40 FT.	1350 LB.
50 FT.	1615 LB.
60 FT.	1925 LB.
70 FT.	2190 LB.
80 FT.	2500 LB.

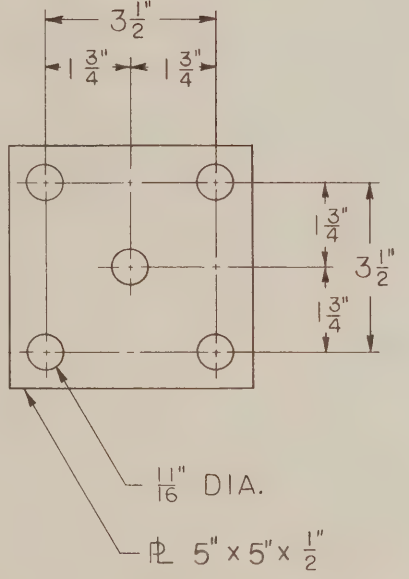
MODEL T-36EH SERIES TOWERS
SELF-SUPPORTING TOWER KITS

20 FT.	900 LB.
30 FT.	1225 LB.
40 FT.	1600 LB.
50 FT.	1925 LB.
60 FT.	2300 LB.
70 FT.	2625 LB.
80 FT.	3000 LB.

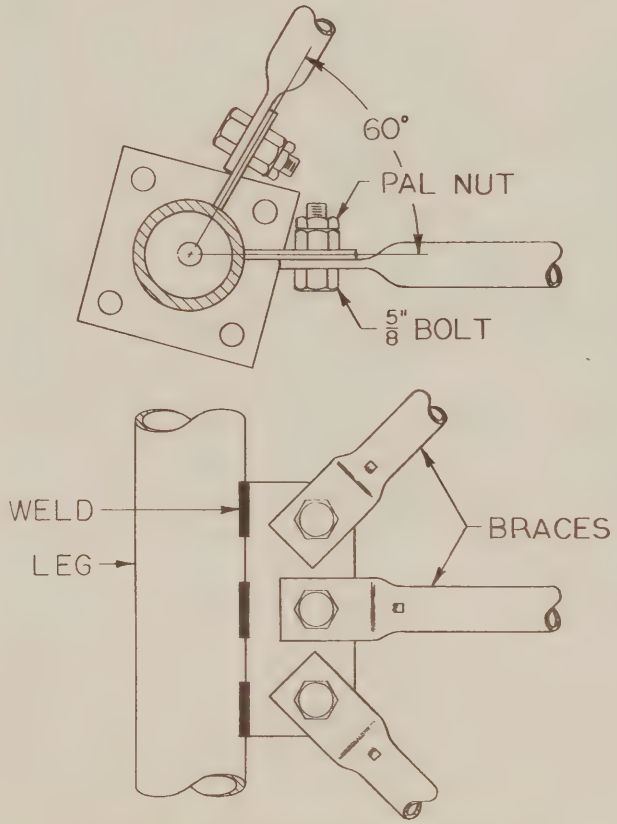
TOWERS COMPLETE WITH TOP CAPS, BASE MOUNT AND GROUNDING KIT.


T-36: 2" SCHED. 40 PIPE
T-36H: 2½" SCHED. 40 PIPE
T-36EH: 2½" SCHED. 80 PIPE
5/8" BOLTS
1/4" THICK (TYP.)
T-36: 1" x .065" TUBE
T-36H: 1 1/4" x .083" TUBE
T-36EH: 1 1/4" x .083" TUBE
T-36 36" AND T-36H 35 1/2"
42 3/8"
PL 5"x5"x 1/2"
241"

SECTION DETAIL



FLANGE DETAIL



BRACE CONNECTION DETAIL

TOWER SPECIFICATIONS				
SECTION NO.		T-36	T-36H	T-36EH
C. TO C. OF LEGS		42 3/8"	42 3/8"	42 3/8"
SECTION LENGTH		241"	241"	241"
WEIGHT OF SECTION		400 LB.	575 LB.	700 LB.
LEG SIZE		2" SCHED. 40 PIPE	2½" SCHED. 40 PIPE	2½" SCHED. 80 PIPE
LEG CROSS SECTION AREA		1.075 SQ.IN.	1.7 SQ. IN.	2.25 SQ. IN.
L/R OF LEG		51.9	43.16	43.24
RAD. GY. TOWER		17.32"	17.32"	17.32"
MOMENT	EIA	59.7 K-FT.	98.5 K-FT.	129.7 K-FT.
	UBC	79.6 K-FT.	131.3 K-FT.	172.5 K-FT.
TOWER AREA PER LINEAL FOOT	EIA	.65 SQ.FT.	.78 SQ.FT.	.78 SQ.FT.
	UBC	.75 SQ.FT.	.89 SQ.FT.	.89 SQ.FT.

TRI-EX TOWER CORPORATION

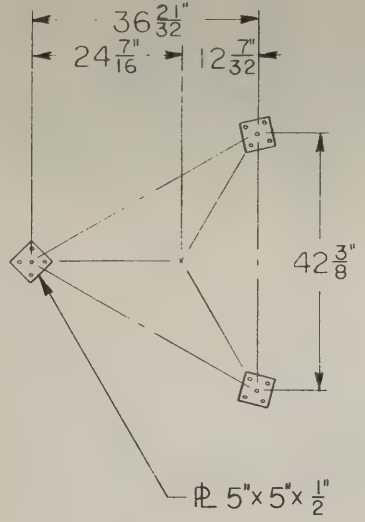
SCALE: —— APPROVED BY: DRAWN BY: R. C.

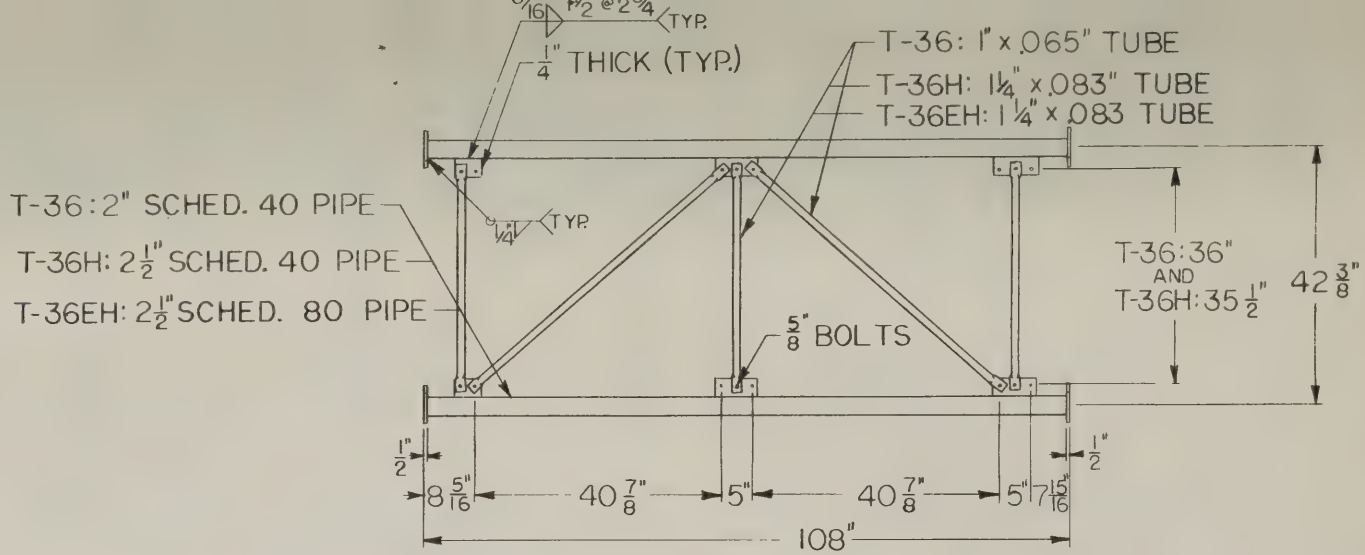
DATE: 8-9-71 REVISED

MODEL T-36 SERIES SECTION

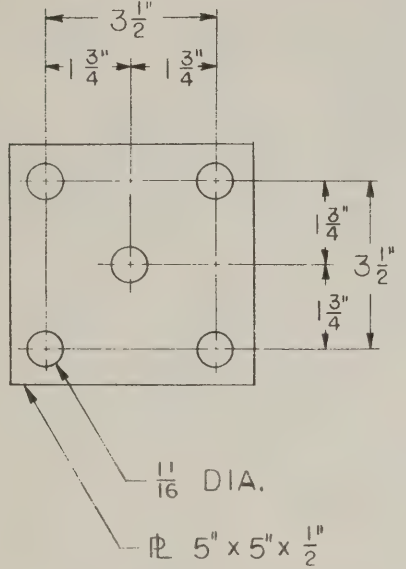
"20 FOOT" DRAWING NUMBER C-036-020-012

17288 PRINTED ON NO. 1000H CLEARPRINT

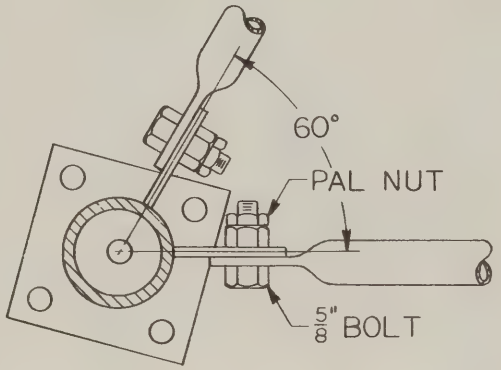


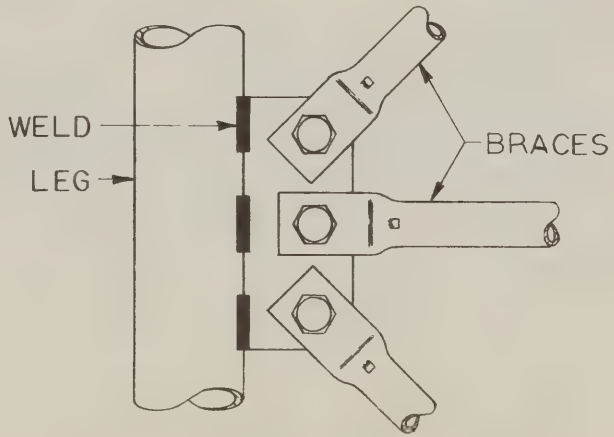


SECTION DETAIL



FLANGE DETAIL





BRACE CONNECTION DETAIL

TOWER SPECIFICATION				
SECTION NO.		T-36	T-36H	T-36EH
C. TO C. OF LEGS		42 3/8"	42 3/8"	42 3/8"
SECTION LENGTH		108"	108"	108"
WEIGHT OF SECTION		200 LB.	280 LB.	350 LB.
LEG SIZE		2" SCHED. 40 PIPE	2 1/2" SCHED. 40 PIPE	2 1/2" SCHED. 80 PIPE
LEG CROSS SECTION AREA		1.075 SQ.IN.	1.7 SQ.IN.	2.25 SQ.IN.
L/R OF LEG		51.9	43.16	44.24
RAD. GY. TOWER		17.32"	17.32"	17.32"
MOMENT	EIA	59.7 K-FT.	98.5 K-FT.	129.7 K-FT.
	UBC	79.6 K-FT	131.3 K-FT	172.5 K-FT
TOWER AREA PER LINEAL FOOT	EIA	.65 SQ.FT.	.78 SQ.FT.	.78 SQ.FT.
	UBC	.75 SQ.FT.	.89 SQ.FT.	.89 SQ.FT.

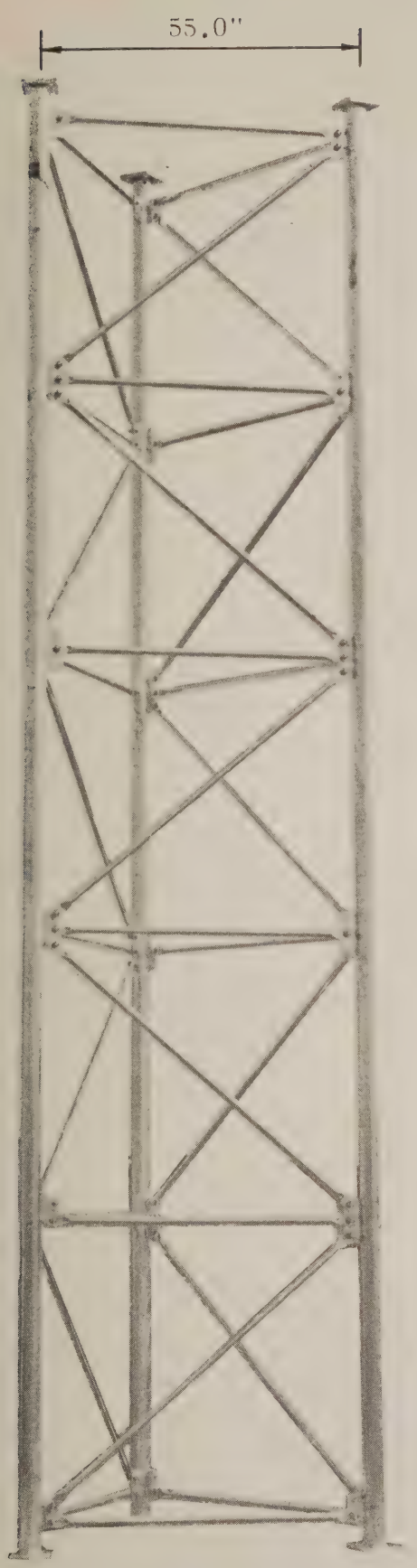
TRI-EX TOWER CORPORATION

SCALE:	APPROVED BY	DRAWN BY: R. C.
DATE: 8-9-71		REVISED

MODEL T-36 SERIES SECTION

"9 FOOT" DRAWING NUMBER: DWG-T36-09

17238 PRINTED ON NO. 1000H CLEARPRINT



20 FOOT SECTION

New.... Tri-Ex®

MODEL FORTY-EIGHT

COMMUNICATION TOWER

DESIGNED SPECIFICALLY FOR MICROWAVE AND HEAVY DUTY COMMUNICATIONS INSTALLATIONS

- CONSTRUCTION:

  THE NO. 48 SERIES TOWER IS CONSTRUCTED IN AN EQUILATERAL TRIANGLE WITH TUBULAR STEEL LEGS AND CROSS-BRACING. THE CROSS-SECTION SIZE IS 55.0" ON LEG CENTERS. DIAMETER OF LEG SECTIONS VARY FROM 2.8" TO 3.5" TO MEET INSTALLATION REQUIREMENTS. CROSS-BRACING IS BOLTED TO LEGS WITH H.S. BOLTS.

- FINISH:

  ALL TOWER COMPONENTS ARE COMPLETELY HOT-DIPPED GALVANIZED AFTER FABRICATION.

- APPLICATIONS:

  DESIGNED FOR LARGE GUYED COMMUNICATIONS USES; MICROWAVE, CATV, AM-FM BROADCAST... ALSO FOR SELF-SUPPORTING INSTALLATIONS UP TO 100 FEET.

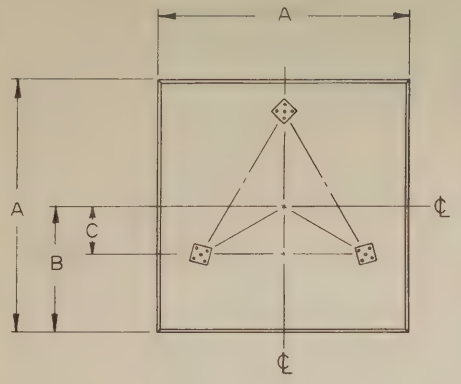
- MODELS:

SECTION NUMBER	SECTION WEIGHT
T-48	605 LBS.
T-48H	750 LBS.
T-48EH	925 LBS.

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

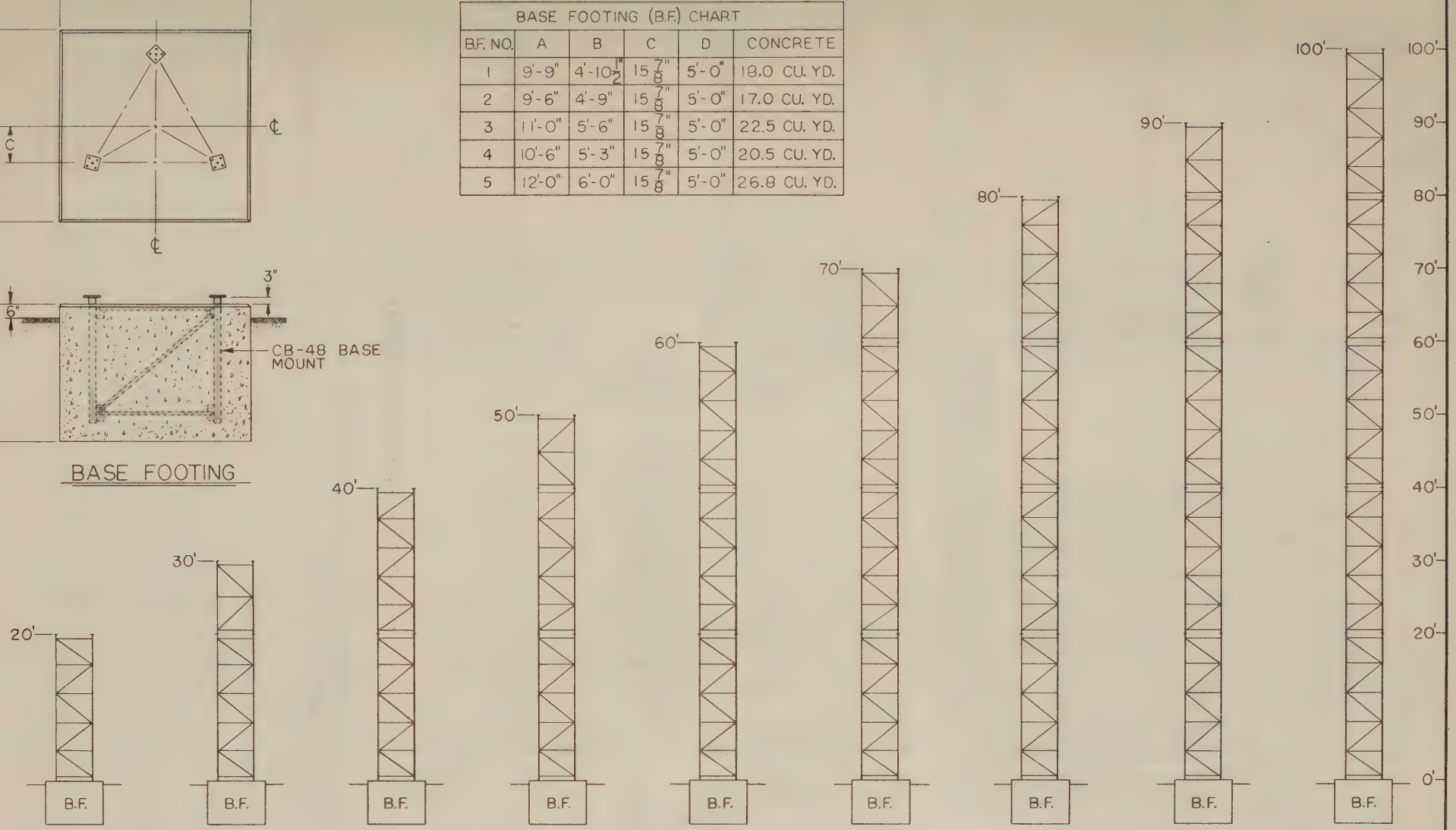
T-48 SERIES

Model No.	Description	Weight
T-48	Standard 20 Foot Section	605
T-48H	Heavy Duty 20 Foot Section	750
T-48EH	Extra Heavy 20 Foot Section	925
T-48-9	Standard 9 Foot Section	295
T-48H-9	Heavy Duty 9 Foot Section	360
T-48EH-9	Extra Heavy 9 Foot Section	[illegible]
CB-48	Concrete Base Mount	1[illegible]



BASE FOOTING (B.F.) CHART					
B.F. NO.	A	B	C	D	CONCRETE
1	9'-9"	4'-10 1/2"	15 7/8"	5'-0"	18.0 CU. YD.
2	9'-6"	4'-9"	15 7/8"	5'-0"	17.0 CU. YD.
3	11'-0"	5'-6"	15 7/8"	5'-0"	22.5 CU. YD.
4	10'-6"	5'-3"	15 7/8"	5'-0"	20.5 CU. YD.
5	12'-0"	6'-0"	15 7/8"	5'-0"	26.8 CU. YD.

BASE FOOTING



MODEL	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.	30#	40#	50#	B.F.
T-48	208	155	122	1	132	96	75	1	91	64	48	1	66	44	31	1	46	28	18	2	32	16	7	2	20	6	0	2	9	0	0	2	0	0	0	—
T-48H	279	208	165	3	179	131	102	3	126	90	68	3	92	63	46	3	68	44	30	4	49	29	16	4	34	16	5	4	21	5	0	4	10	0	0	4
T-48EH	382	285	227	5	248	183	144	5	178	129	99	5	134	94	71	5	102	70	50	5	78	51	34	5	60	35	21	5	44	22	9	5	30	11	0	5

NOTE:

THE NUMBERS LISTED DIRECTLY BELOW EACH TOWER HEIGHT INDICATE THE MAXIMUM ALLOWABLE WIND LOAD AREA IN SQUARE FEET THAT CAN BE MOUNTED AT THE TOWER APEX.

EIA SPECIFICATIONS
30 PSF...86.6 MPH
40 PSF...100.0 MPH
50 PSF...111.8 MPH

TRI-EX TOWER CORPORATION

SCALE: —— APPROVED BY: DRAWN BY R.C.

DATE: 3/17/72 REVISED

MODEL T-48 SERIES S.S. TOWERS

DRAWING NUMBER C-048-000-001

17X22 PRINTED ON NO. 1000H CLEARPRINT

MODEL T-48 SERIES TOWERS
SELF-SUPPORTING TOWER KITS

TOWER HEIGHT	SHIPPING WEIGHT
20 FT.	825 LB.
30 FT.	1120 LB.
40 FT.	1430 LB.
50 FT.	1725 LB.
60 FT.	2035 LB.
70 FT.	2330 LB.
80 FT.	2640 LB.
90 FT.	2935 LB.

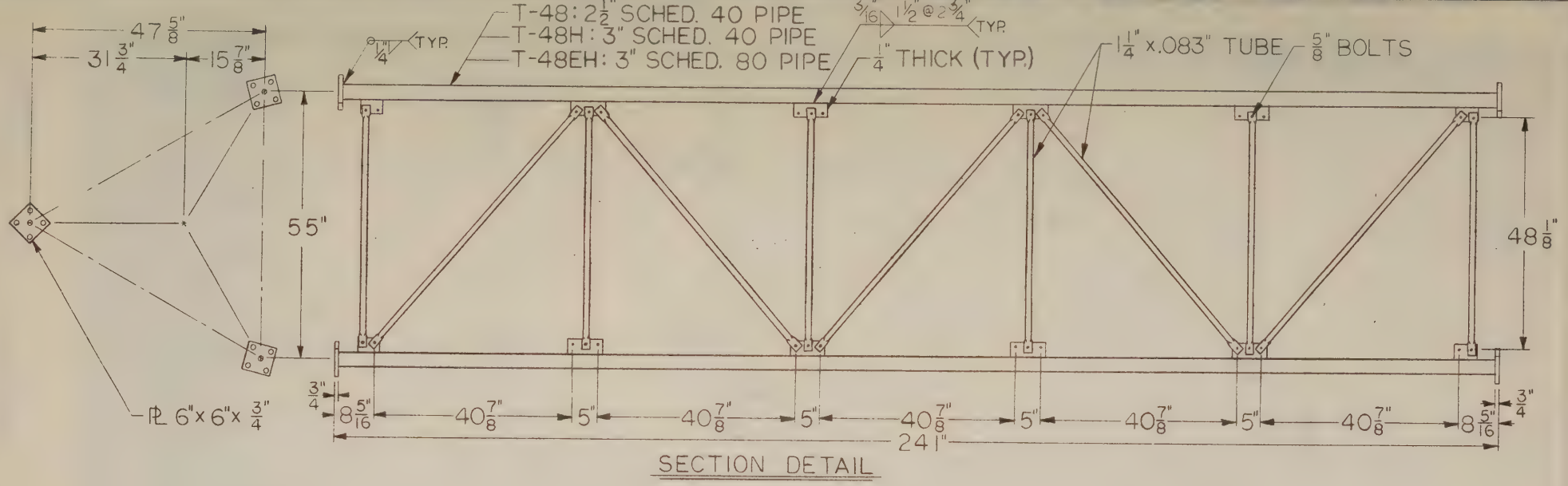
MODEL T-48H SERIES TOWERS
SELF-SUPPORTING TOWER KITS

20 FT.	970 LB.
30 FT.	1330 LB.
40 FT.	1720 LB.
50 FT.	2080 LB.
60 FT.	2470 LB.
70 FT.	2830 LB.
80 FT.	3220 LB.
90 FT.	3580 LB.
100 FT.	3970 LB.

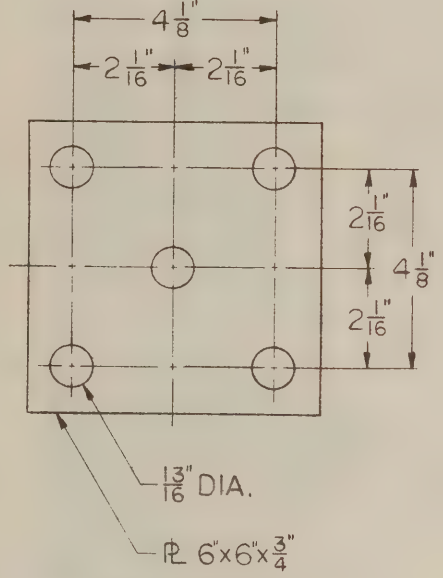
MODEL T-48EH SERIES TOWERS
SELF-SUPPORTING TOWER KITS

20 FT.	1145 LB.
30 FT.	1585 LB.
40 FT.	2075 LB.
50 FT.	2515 LB.
60 FT.	3000 LB.
70 FT.	3440 LB.
80 FT.	3925 LB.
90 FT.	4365 LB.
100 FT.	4850 LB.

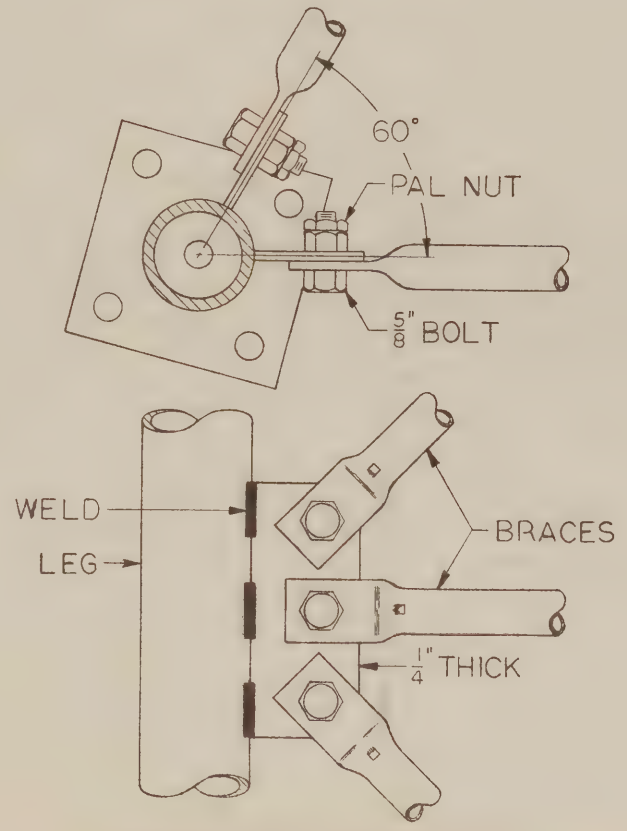
TOWERS COMPLETE WITH TOP CAPS, BASE MOUNT AND GROUNDING KIT.



SECTION DETAIL



FLANGE DETAIL



BRACE CONNECTION DETAIL

TOWER SPECIFICATIONS				
SECTION NO.		T-48	T-48H	T-48EH
C. TO C. OF LEGS		55"	55"	55"
SECTION LENGTH		241"	241"	241"
WEIGHT OF SECTION		605 LB.	750 LB.	925 LB.
LEG SIZE		2 1/2" SCHED. 40 PIPE	3" SCHED. 40 PIPE	3" SCHED. 80 PIPE
LEG CROSS SECTION AREA		1.7 SQ. IN.	2.23 SQ. IN.	3.02 SQ. IN.
L/R OF LEG		43.16	35.20	35.85
RAD. GY. TOWER		22.47"	22.47"	22.47"
MOMENT	EIA	127.5 K-FT.	173.0 K-FT.	233.8 K-FT.
	UBC	169.6 K-FT.	230.1 K-FT.	311.0 K-FT.
TOWER AREA PER LINEAL FOOT	EIA	.83 SQ.FT.	.94 SQ.FT.	.94 SQ.FT.
	UBC	.90 SQ.FT.	1.08 SQ.FT.	1.08 SQ.FT.

TRI-EX TOWER CORPORATION

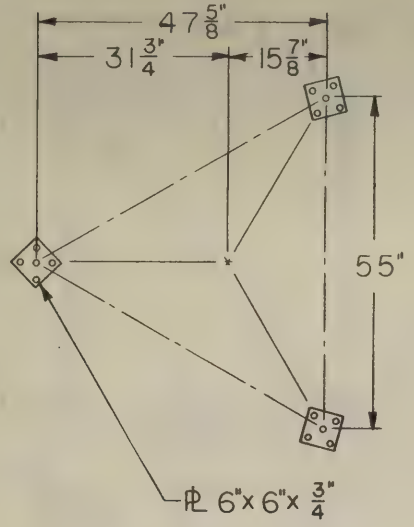
SCALE: | APPROVED BY: | DRAWN BY R. C.

DATE: 8-5-71 | REVISED

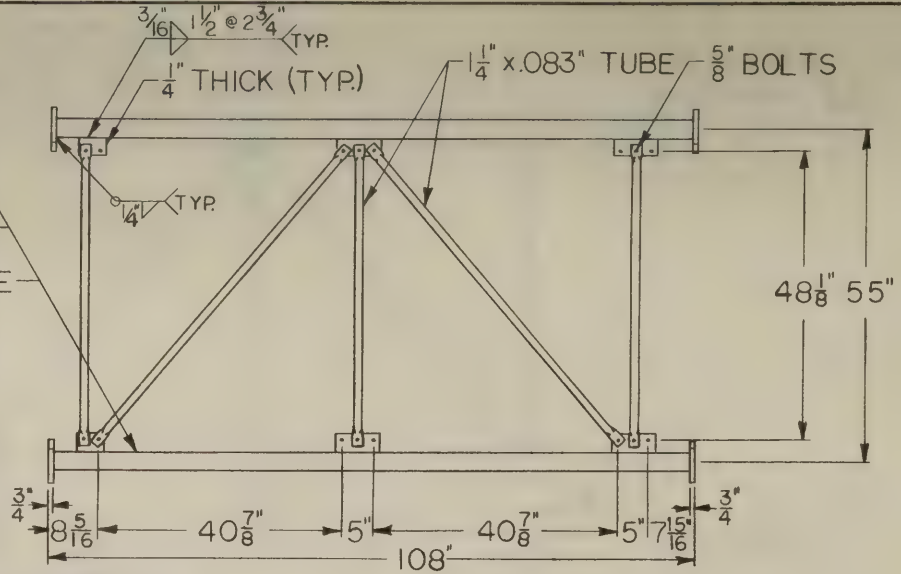
MODEL T-48 SERIES SECTION

"20 FOOT"

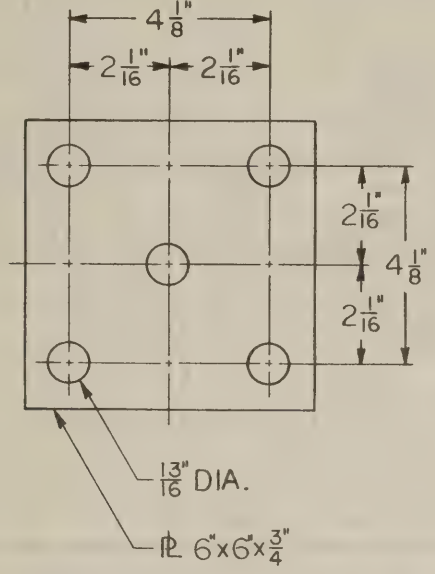
DRAWING NUMBER C-048-241-010



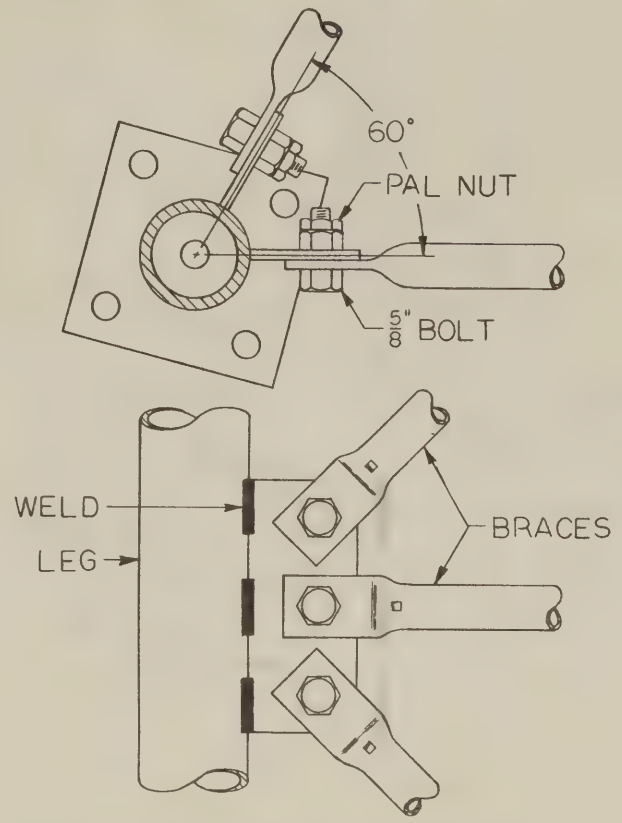
T-48: 2 1/2" SCHED. 40 PIPE
T-48H: 3" SCHED. 40 PIPE
T-48EH: 3" SCHED. 80 PIPE



SECTION DETAIL



FLANGE DETAIL



BRACE CONNECTION DETAIL

TOWER SPECIFICATIONS				
SECTION NO.		T-48	T-48H	T-48EH
C. TO C. OF LEGS		55"	55"	55"
SECTION LENGTH		108"	108"	108"
WEIGHT OF SECTION		300 LB.	375 LB.	460 LB.
LEG SIZE		2 1/2" SCHED. 40 PIPE	3" SCHED. 40 PIPE	3" SCHED. 80 PIPE
LEG CROSS SECTION AREA		1.7 SQ. IN.	2.23 SQ. IN.	3.02 SQ. IN.
L/R OF LEG		43.16	35.20	35.85
RAD. GY. TOWER		22.47"	22.47"	22.47"
MOMENT	EIA	127.5 K-FT	173.0 K-FT	233.8 K-FT
	UBC	169.6 K-FT	230.1 K-FT	311.0 K-FT
TOWER AREA PER LINEAL FOOT	EIA	.83 SQ.FT.	.94 SQ.FT.	.94 SQ.FT.
	UBC	.90 SQ.FT.	1.08 SQ.FT.	1.08 SQ.FT.

TRI-EX TOWER CORPORATION

SCALE: —— APPROVED BY: DRAWN BY R. C.
DATE: 8-6-71 REVISED

MODEL T-48 SERIES SECTION
" 9 FOOT"
DRAWING NUMBER C-048-241-011

17X23 PRINTED ON NO. 1600M CLEARPRINT

Tri-Ex TOWER CORPORATION

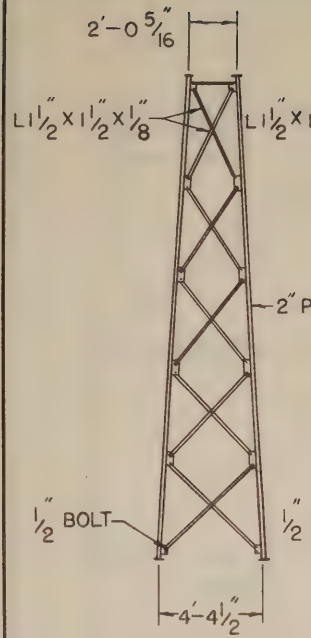
7182 RASMUSSEN AVE., VISALIA, CALIF.

New.....

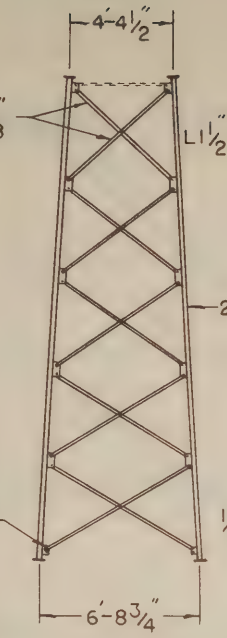
TKD SERIES
MICROWAVE TOWER

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

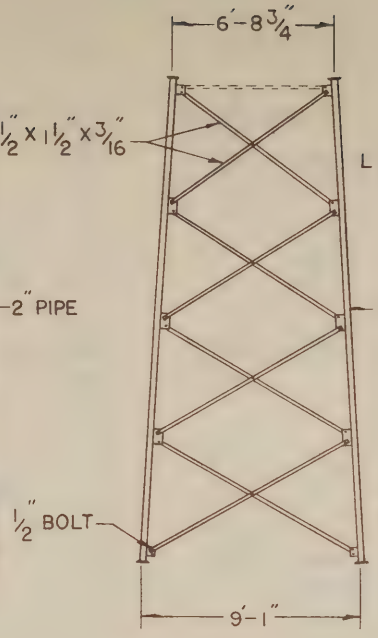
DATE	SYM.	REVISION	DR.	CK.



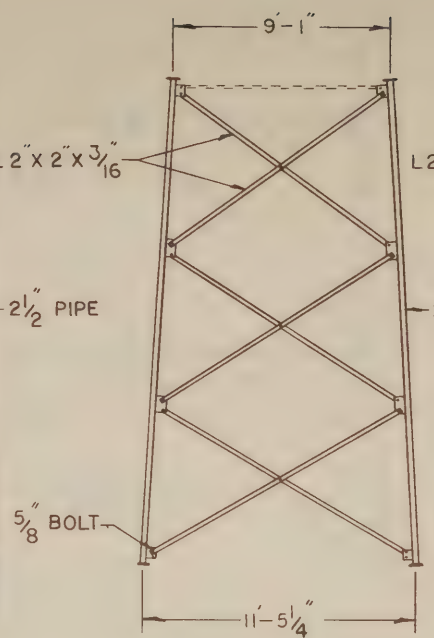
TKD-201



TKD-202



TKD-203



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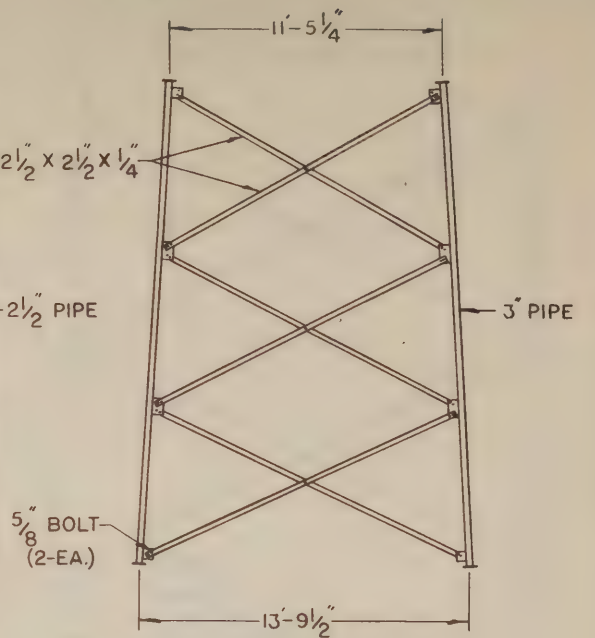
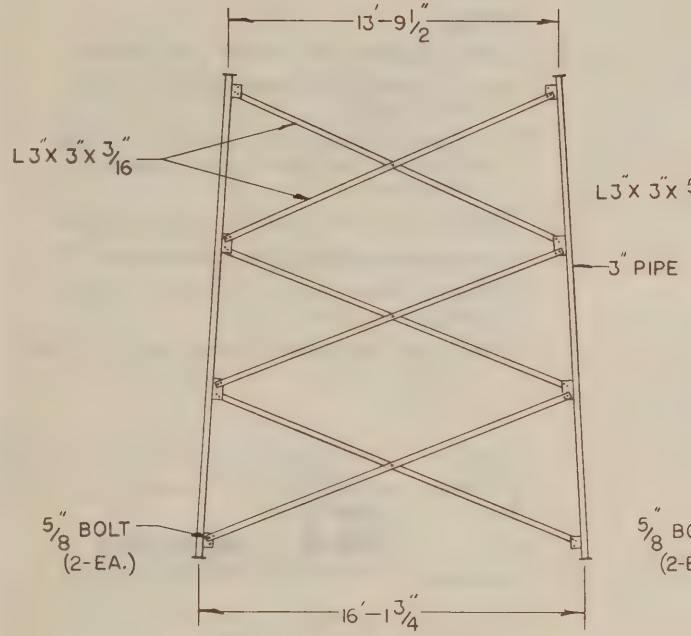


TKD-205



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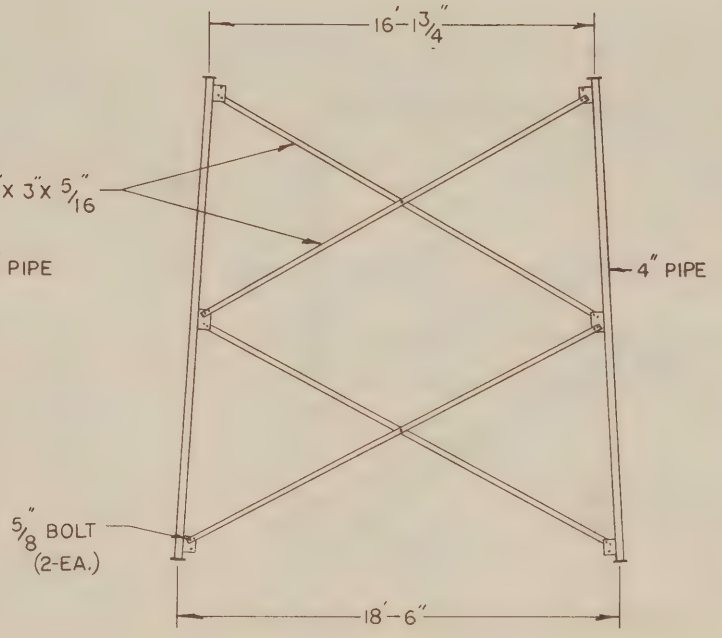


TKD-207

NOTES:

1) ALL SECTIONS ARE 20 FEET IN LENGTH
2) ALL DIMENSIONS SHOWN ARE FROM LEG CENTER LINES
3) MATERIALS CONFORM TO ASTM A-53 GRADE B FOR PIPE AND ASTM A-36 FOR SHAPES AND PLATES
4) BOLTS CONFORM TO ASTM A-325 OR EQUAL
5) GALVANIZING CONFORMS TO ASTM A-123
6) DUE TO CONCENTRATED LOADING THE BRACE AND LEG SIZE MAY VARY
7) SECTIONS ARE EITHER TRIANGULAR OR SQUARE

NO.	MATERIAL/DESCRIPTION	LENGTH	QTY.

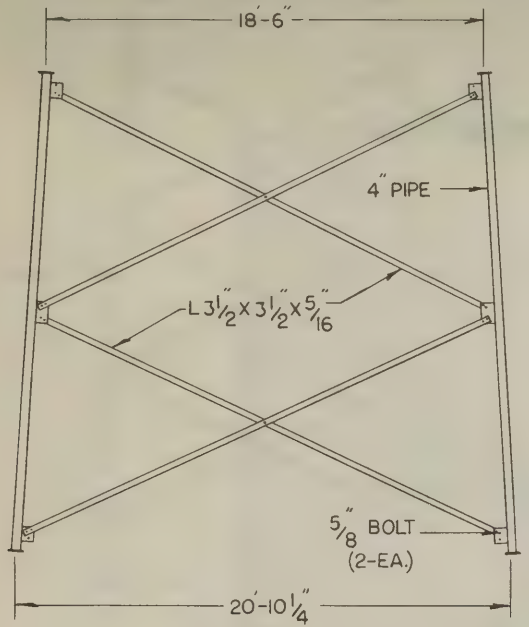
Tri-Ex. TOWER CORPORATION
7182 Rasmussen Avenue, Visalia, Calif. 93277

JOB/MODEL	SCALE	DRAWN BY A.S.
		APPROVED BY

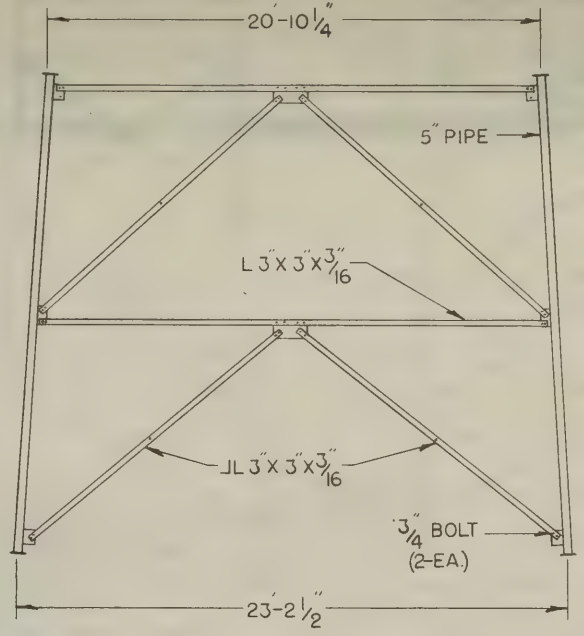
TITLE
MODEL TKD SERIES SECTIONS

DATE	DRAWING NUMBER	REVISION
9-6-77	C-100-035-770906-1	

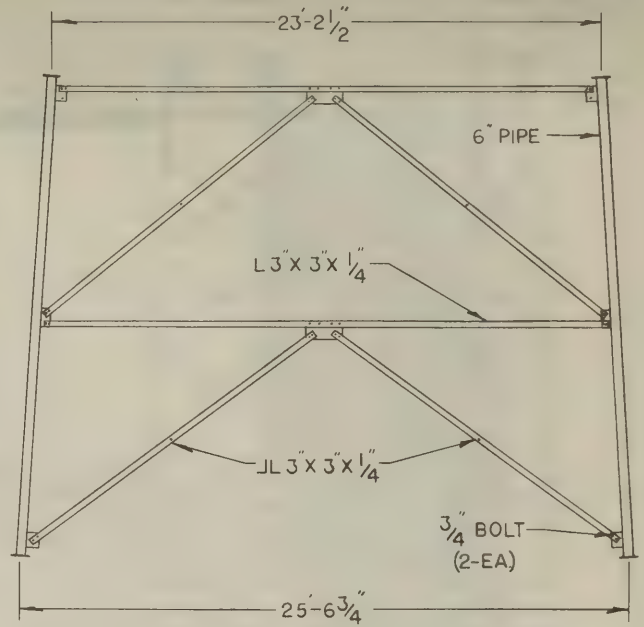
DATE	SYM.	REVISION	DR.	CK.



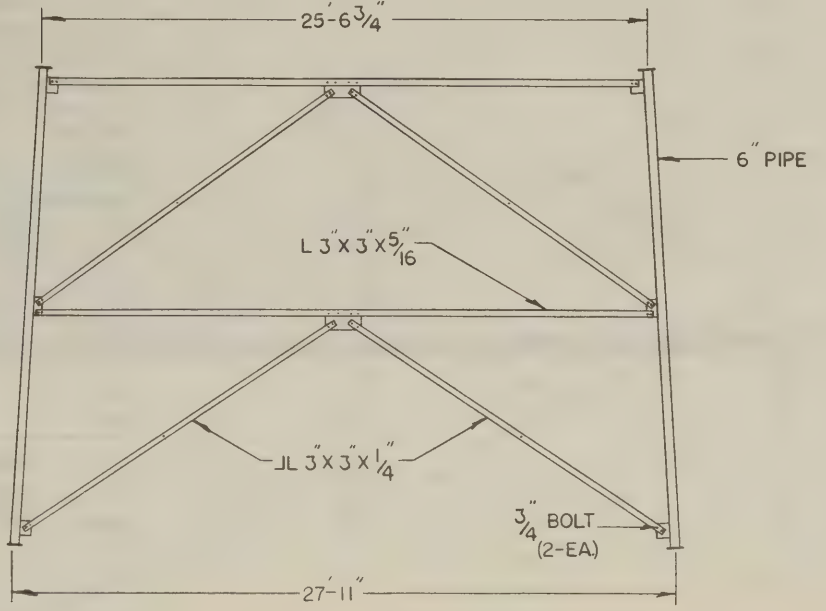
TKD-208



TKD-209



TKD-210



TKD 211

NOTES:

1) ALL SECTIONS ARE 20 FEET IN LENGTH
2) ALL DIMENSIONS SHOWN ARE FROM LEG CENTER LINES
3) MATERIALS CONFORM TO ASTM A-53 GRADE B FOR PIPE AND ASTM A-36 FOR SHAPES AND PLATES
4) BOLTS CONFORM TO ASTM A-325 OR EQUAL
5) GALVANIZING CONFORMS TO ASTM A-123
6) DUE TO CONCENTRATED LOADING THE BRACE AND LEG SIZE MAY VARY
7) SECTIONS ARE EITHER TRIANGULAR OR SQUARE

NO.	MATERIAL/DESCRIPTION	LENGTH	QTY.

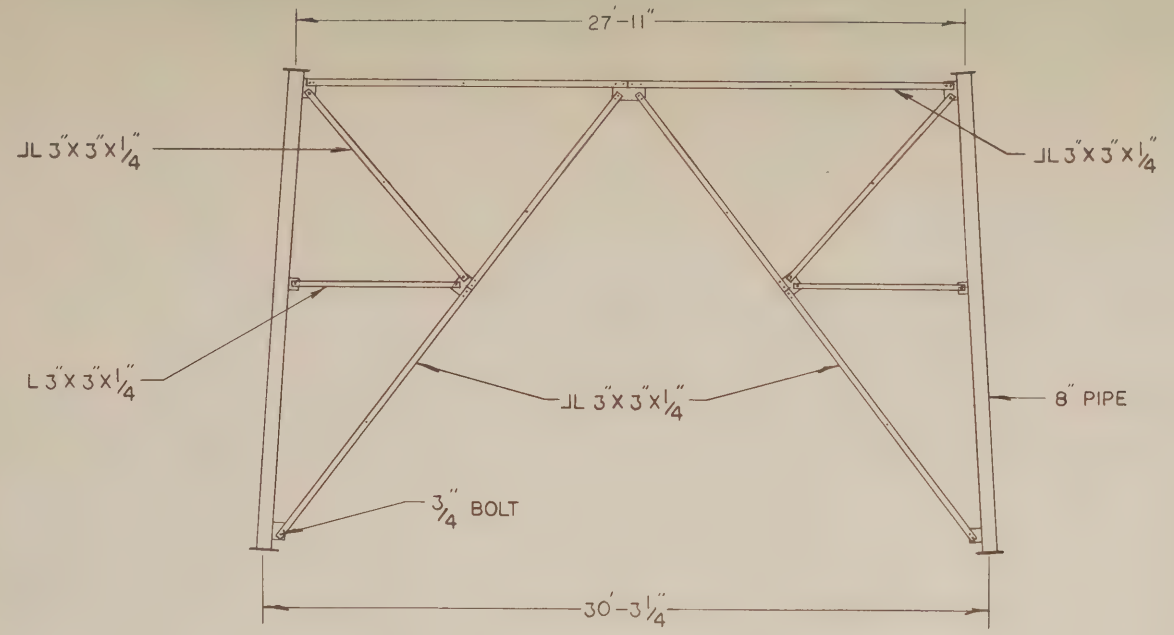
Tri-Ex. TOWER CORPORATION
7182 Rasmussen Avenue, Visalia, Calif. 93277

JOB/MODEL	SCALE	DRAWN BY A. S.
		APPROVED BY

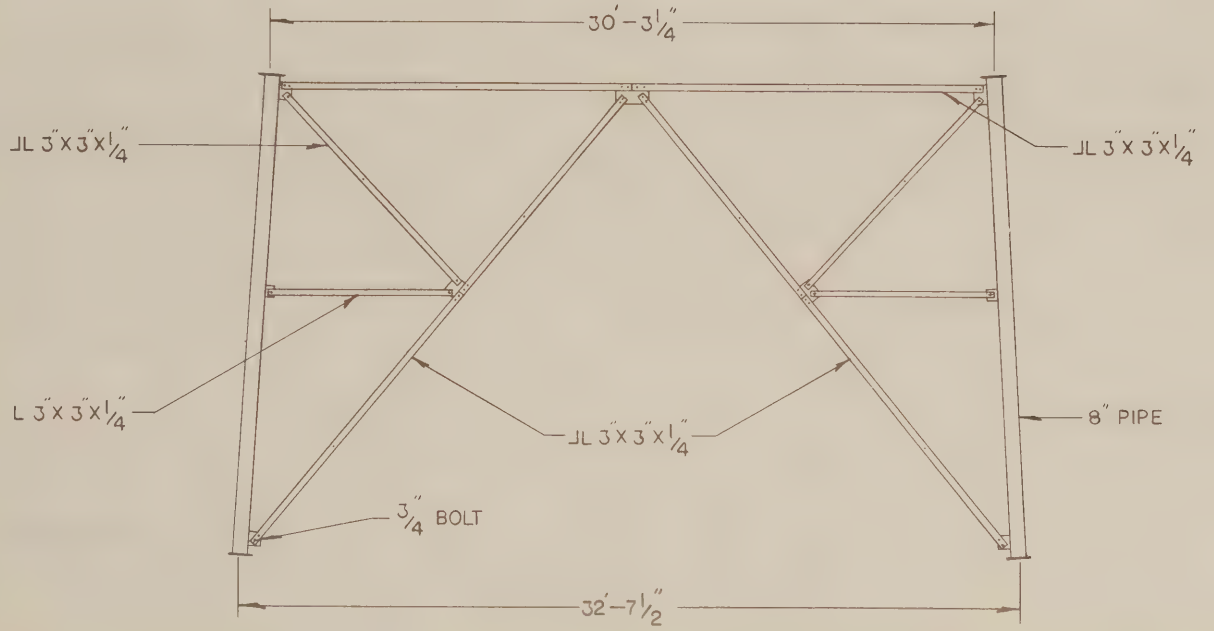
TITLE: MODEL TKD SERIES SECTIONS

DATE	DRAWING NUMBER	REVISION
9-8-77	C-100-035-770906-2	

DATE	SYM.	REVISION	DR.	CK.



TKD-212



TKD-213

NOTES:

1) ALL SECTIONS ARE 20 FEET IN LENGTH
2) ALL DIMENSIONS SHOWN ARE FROM LEG CENTER LINES
3) MATERIALS CONFORM TO ASTM A-53 GRADE B FOR PIPE AND ASTM A-36 FOR SHAPES AND PLATES
4) BOLTS CONFORM TO ASTM A-325 OR EQUAL
5) GALVANIZING CONFORMS TO ASTM A-123
6) DUE TO CONCENTRATED LOADING THE BRACE AND LEG SIZE MAY VARY
7) SECTIONS ARE EITHER TRIANGULAR OR SQUARE

NO.	MATERIAL/DESCRIPTION	LENGTH	QTY.

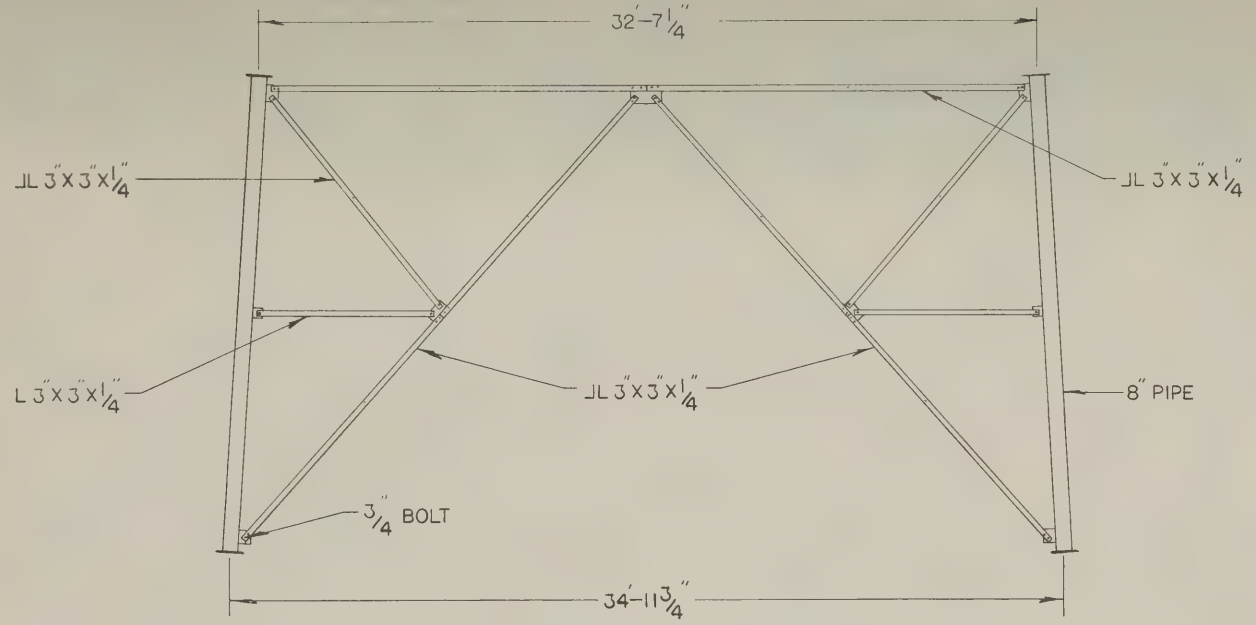
Tri-Ex. TOWER CORPORATION
7182 Rasmussen Avenue, Visalia, Calif. 93277

JOB/MODEL	SCALE	DRAWN BY A.S.
		APPROVED BY

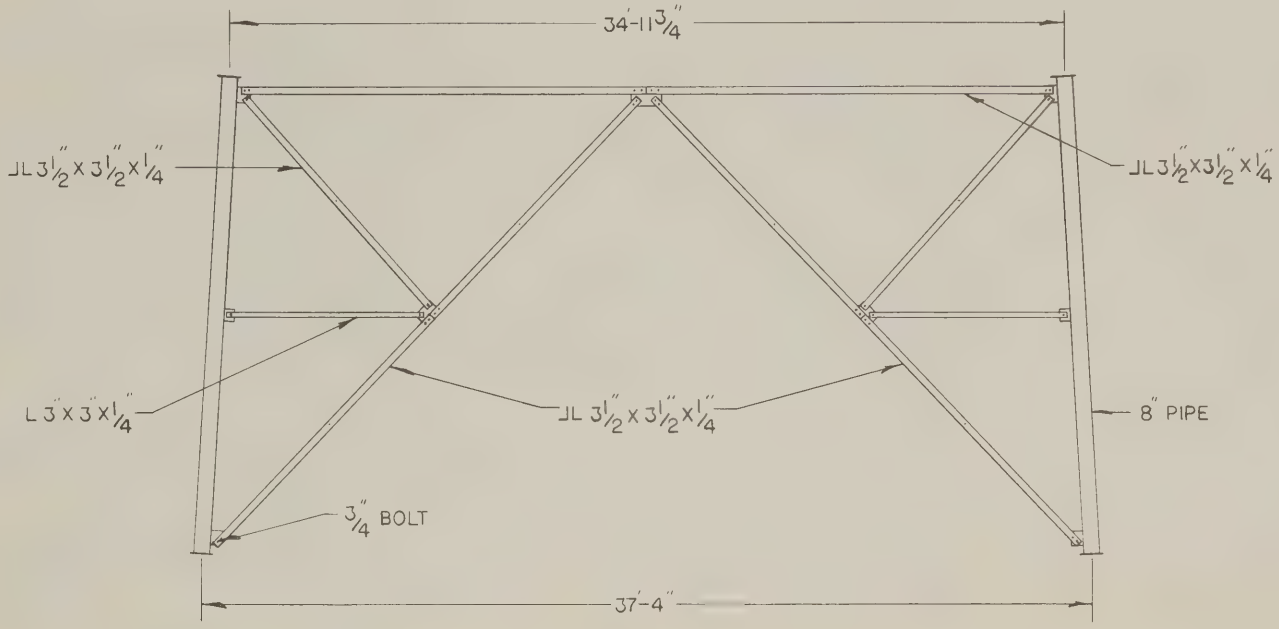
TITLE
MODEL TKD SERIES SECTIONS

DATE	DRAWING NUMBER	REVISION
9-13-77	C-100-035-770906-3	

DATE	SYM.	REVISION	DR.	CK.



TKD-214



TKD-215

NOTES:

1) ALL SECTIONS ARE 20 FEET IN LENGTH
2) ALL DIMENSIONS SHOWN ARE FROM LEG CENTER LINES
3) MATERIALS CONFORM TO ASTM A-53 GRADE B FOR PIPE AND ASTM A-36 FOR SHAPES AND PLATES
4) BOLTS CONFORM TO ASTM A-325 OR EQUAL
5) GALVANIZING CONFORMS TO ASTM A-123
6) DUE TO CONCENTRATED LOADING THE BRACE AND LEG SIZE MAY VARY
7) SECTIONS ARE EITHER TRIANGULAR OR SQUARE

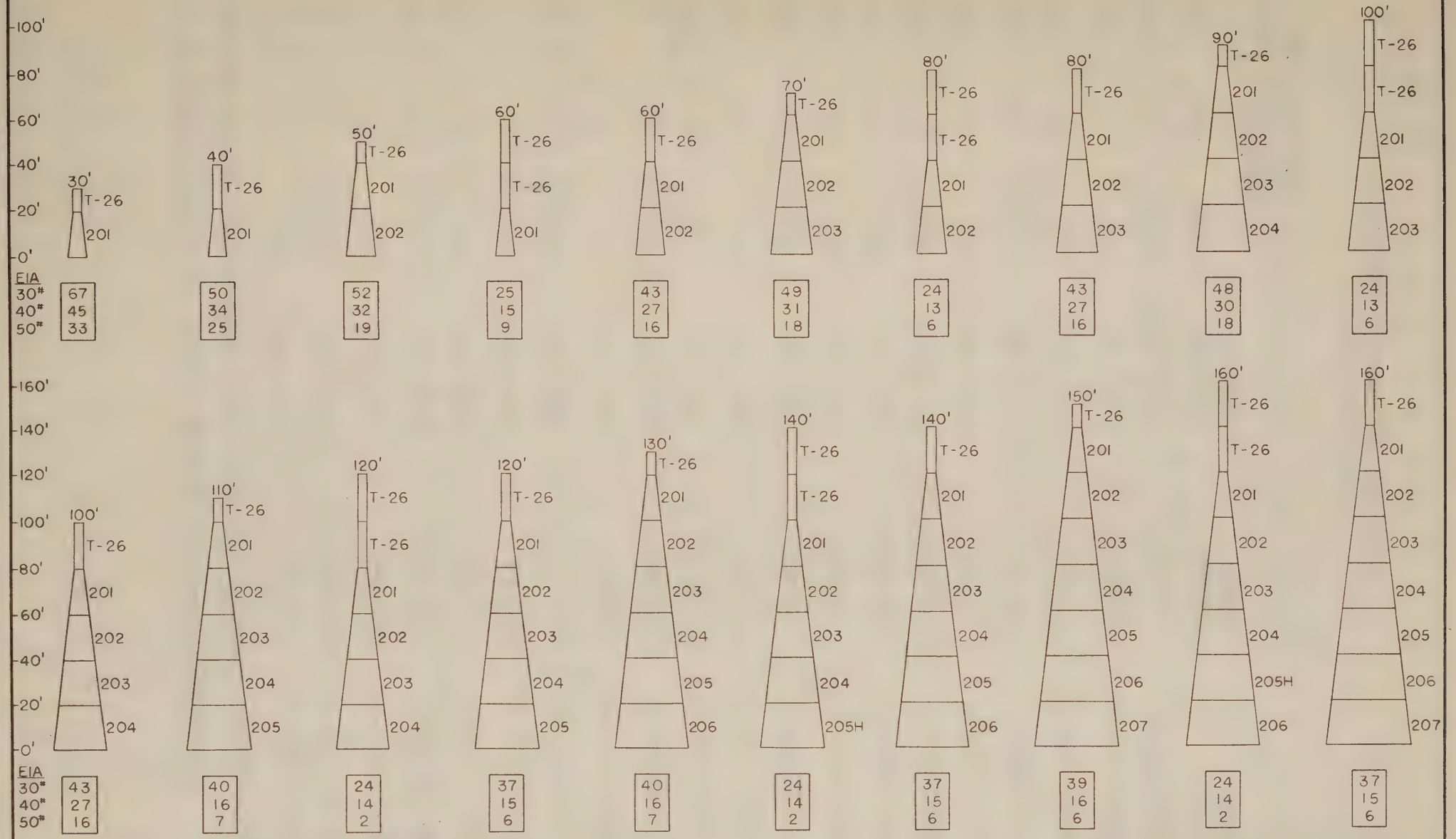
NO.	MATERIAL/DESCRIPTION	LENGTH	QTY.

Tri-Ex® TOWER CORPORATION
7182 Rasmussen Avenue, Visalia, Calif. 93277

JOB/MODEL	SCALE	DRAWN BY A. S.
		APPROVED BY

TITLE
MODEL TKD SERIES SECTIONS

DATE	DRAWING NUMBER	REVISION
9-13-77	C-100-035-770906-4	



NOTE: THE NUMBERS LISTED DIRECTLY BELOW EACH TOWER HEIGHT INDICATE THE MAXIMUM ALLOWABLE WIND LOAD AREA IN SQUARE FEET THAT CAN BE MOUNTED AT THE TOWER APEX.

THE EIA LISTING AT THE LEFT MARGIN INDICATES THE VARIOUS WIND LOAD ZONES.

TRI-EX TOWER CORPORATION

SCALE: ———	APPROVED BY:	DRAWN BY R.C.
DATE: 1-6-72		REVISED

TKD/26 SERIES TOWERS

"SELF SUPPORTING"

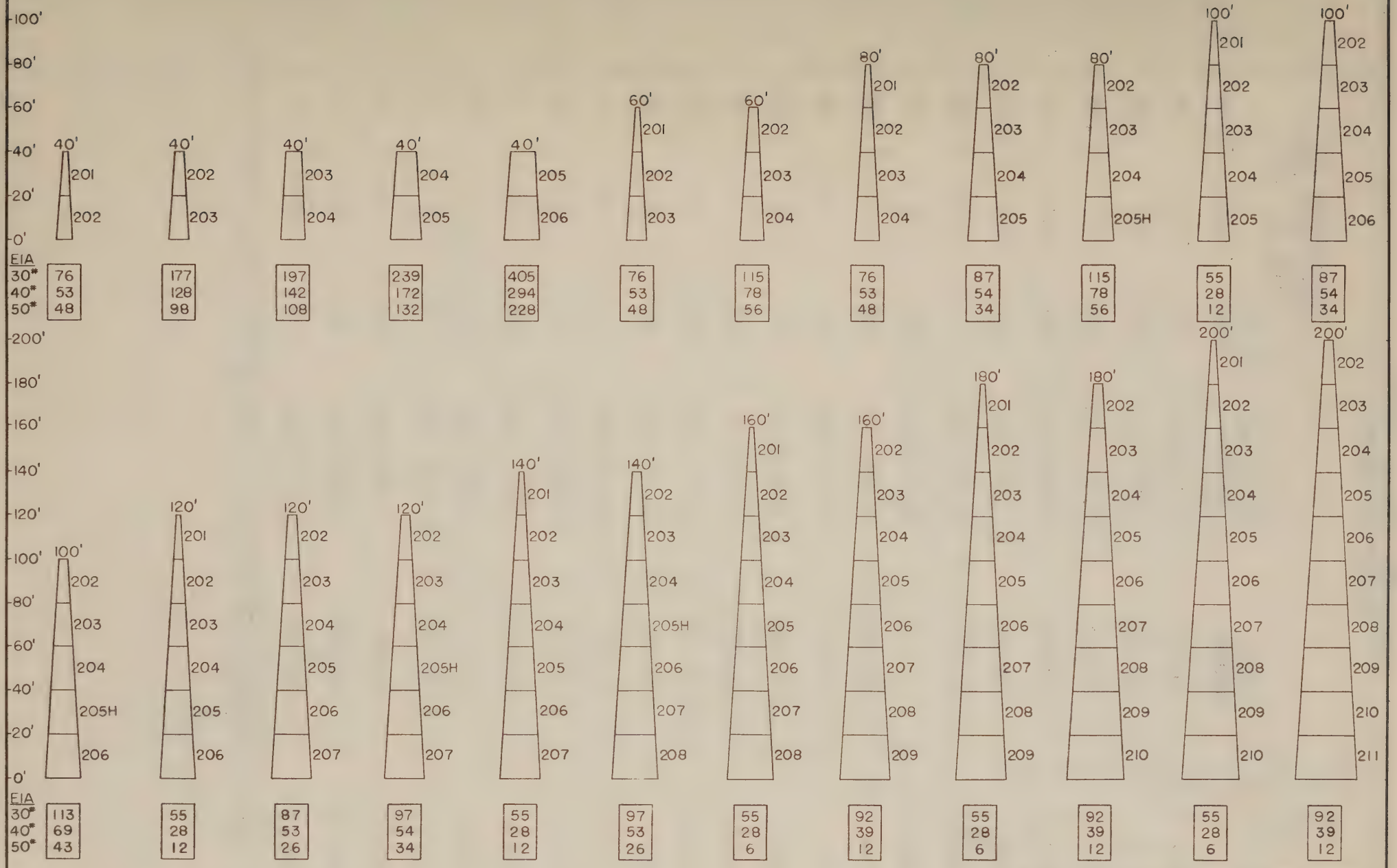
DRAWING NUMBER C-026-035-100

MODEL TKD/26 SERIES TOWERS
SELF-SUPPORTING

TOWER MODEL	TOWER HEIGHT	SHIPPING WEIGHT	ALLOWABLE TOP WIND LOAD AREA (IN SQ. FT.) 30#	40#	50#
TKD/26-30-1	30 FT.	765 LB.	67	45	33
TKD/26-40-1	40 FT.	1050 LB.	50	34	25
TKD/26-50-2	50 FT.	1350 LB.	52	32	19
TKD/26-60-1	60 FT.	1370 LB.	25	15	9
TKD/26-60-2	60 FT.	1500 LB.	43	27	16
TKD/26-70-3	70 FT.	2230 LB.	49	31	18
TKD/26-80-2	80 FT.	1955 LB.	24	13	6
TKD/26-80-3	80 FT.	2380 LB.	43	27	16
TKD/26-90-4	90 FT.	3325 LB.	48	30	18
TKD/26-100-3	100 FT.	2835 LB.	24	13	6
TKD/26-100-4	100 FT.	3475 LB.	43	27	16
TKD/26-110-5	110 FT.	5080 LB.	40	16	7
TKD/26-120-4	120 FT.	3930 LB.	24	14	2
TKD/26-120-5	120 FT.	5280 LB.	37	15	6
TKD/26-130-6	130 FT.	6900 LB.	40	16	7
TKD/26-140-5	140 FT.	5685 LB.	24	14	2
TKD/26-140-6	140 FT.	7055 LB.	37	15	6
TKD/26-150-7	150 FT.	9250 LB.	39	16	6
TKD/26-160-6	160 FT.	7510 LB.	24	14	2
TKD/26-160-7	160 FT.	9670 LB.	37	15	6

NOTE: TOWERS COMPLETE WITH TOP CAPS, BASE MOUNTS AND GROUNDING KIT.

CLIMBING LADDER AND ANTENNA MOUNTS ARE NOT INCLUDED IN PRICES.



NOTE: THE NUMBERS LISTED DIRECTLY BELOW EACH TOWER HEIGHT INDICATE THE MAXIMUM ALLOWABLE WIND LOAD AREA IN SQUARE FEET THAT CAN BE MOUNTED AT THE TOWER APEX.

THE EIA LISTING AT THE LEFT MARGIN INDICATES THE VARIOUS WIND LOAD ZONES.

TRI-EX TOWER CORPORATION

SCALE: ———	APPROVED BY:	DRAWN BY R.C.
DATE: 1-7-72		REVISED

TKD SERIES TOWERS

"SELF SUPPORTING"

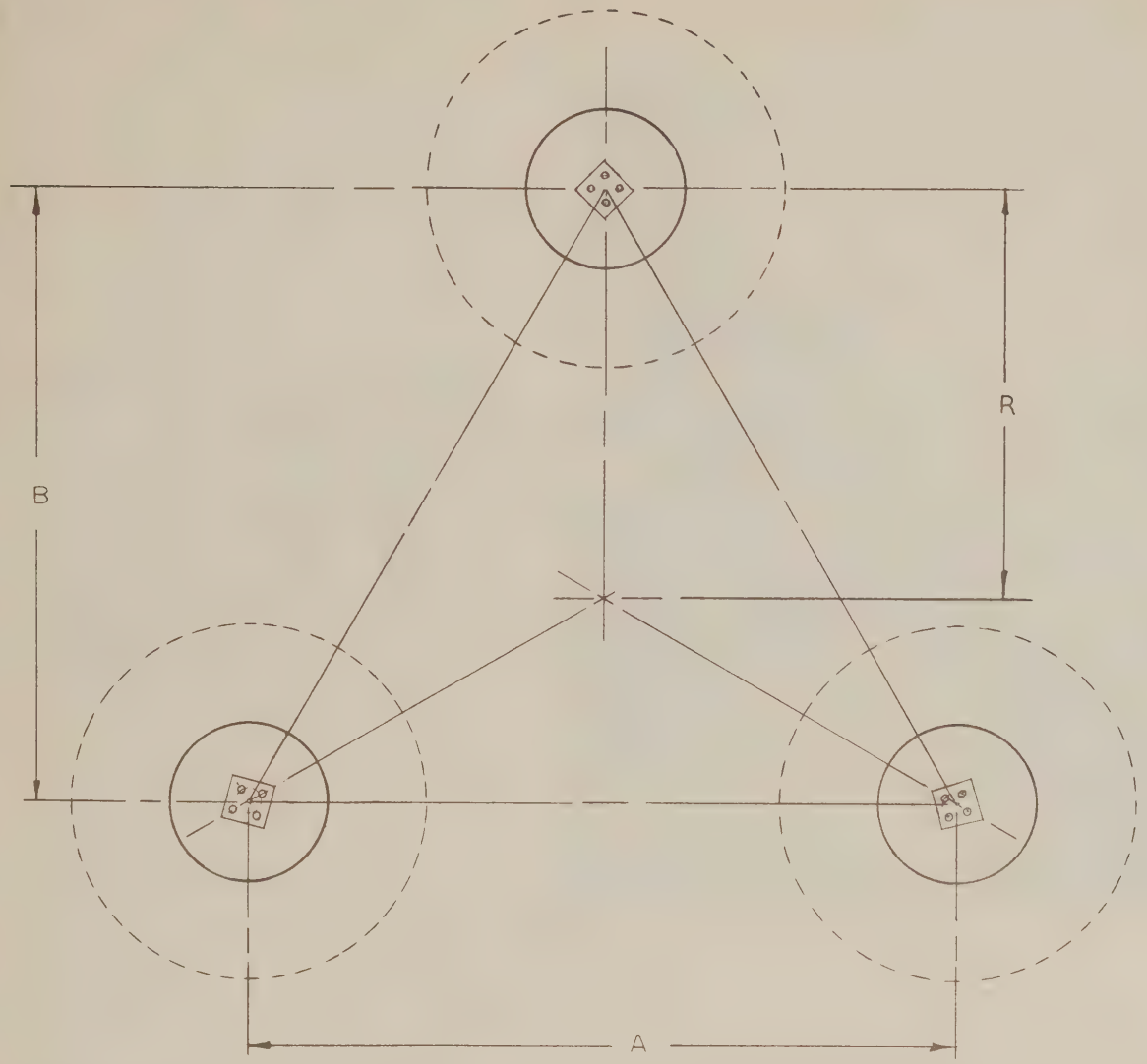
DRAWING NUMBER C-035-035-100

17X22 PRINTED ON NO. 1000H CLEARPRINT

MODEL TKD SERIES TOWERS
SELF-SUPPORTING

TOWER MODEL	TOWER HEIGHT	SHIPPING WEIGHT	ALLOWABLE TOP WIND LOAD AREA (IN SQ. FT.) 30#	40#	50#
TKD-40-2	40 FT.	1,180 LB.	76	53	48
TKD-40-3	40 FT.	1,565 LB.	177	128	98
TKD-40-4	40 FT.	2,075 LB.	197	142	108
TKD-40-5	40 FT.	2,950 LB.	239	172	132
TKD-40-6	40 FT.	3,700 LB.	405	294	228
TKD-60-3	60 FT.	2,060 LB.	76	53	48
TKD-60-4	60 FT.	2,660 LB.	115	78	56
TKD-80-4	80 FT.	3,155 LB.	76	53	48
TKD-80-5	80 FT.	4,415 LB.	115	78	56
TKD-100-5	100 FT.	4,910 LB.	55	28	12
TKD-100-6	100 FT.	6,240 LB.	113	69	43
TKD-120-6	120 FT.	6,735 LB.	55	28	12
TKD-120-7	120 FT.	8,580 LB.	97	54	34
TKD-140-7	140 FT.	9,080 LB.	55	28	12
TKD-140-8	140 FT.	11,465 LB.	97	53	26
TKD-160-8	160 FT.	11,960 LB.	55	28	6
TKD-160-9	160 FT.	14,800 LB.	92	39	12
TKD-180-9	180 FT.	15,295 LB.	55	28	6
TKD-180-10	180 FT.	19,390 LB.	92	39	12
TKD-200-10	200 FT.	19,885 LB.	55	28	6
TKD-200-11	200 FT.	24,960 LB.	92	39	12

NOTE: TOWERS COMPLETE WITH TOP CAPS, BASE MOUNTS, AND GROUNDING KIT.



SECTION NUMBER	A	B	R	ANCHOR BOLTS
TKD-202	$80\frac{3}{4}''$	$69\frac{15}{16}''$	$46\frac{5}{8}''$	$\frac{5}{8}''$ DIA.
TKD-203	109''	$94\frac{7}{16}''$	$62\frac{15}{16}''$	$\frac{5}{8}''$ DIA.
TKD-204	$137\frac{1}{4}''$	$118\frac{7}{8}''$	$79\frac{1}{4}''$	$\frac{5}{8}''$ DIA.
TKD-205	$165\frac{1}{2}''$	$143\frac{11}{32}''$	$95\frac{9}{16}''$	$\frac{3}{4}''$ DIA

TRI-EX TOWER CORPORATION

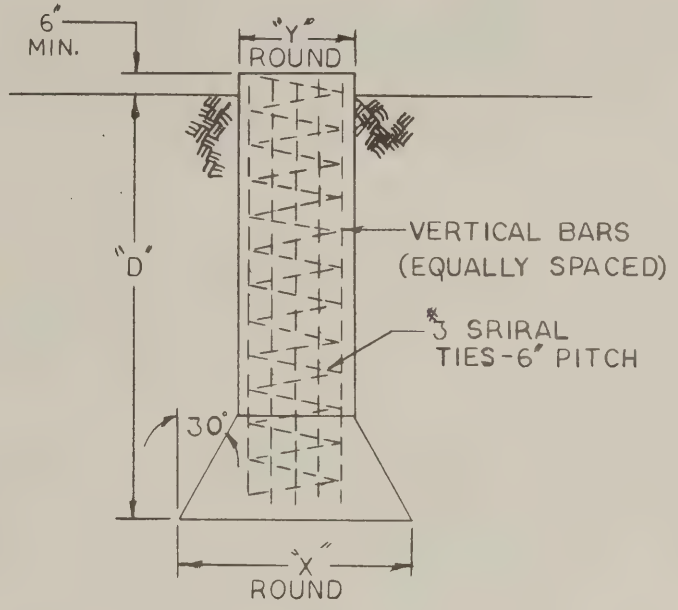
SCALE:	APPROVED BY:	DRAWN BY DR
DATE: 1-70		REVISED

FOOTING DETAILS

TKD-200 SERIES

DRAWING NUMBER C 035-024

11X17 PRINTED ON NO. 1000H CLEARPRINT



SECTION NUMBER	DEPTH "D"	"X"	"Y"	VERTICAL BARS	CONC. REQD. CUBIC YDS.
TKD-202	7'-0"	3'-9"	24"	6 #7 BARS	3.0
TKD-203	7'-0"	5'-0"	24"	6 #7 BARS	4.5
TKD-204	7'-0"	5'-0"	24"	6 #7 BARS	4.5
TKD-205	7'-0"	5'-0"	24"	6 #7 BARS	4.5

NOTE : CONCRETE QUANTITIES SHOWN ARE FOR 3 PIERS.

TRI-EX TOWER CORPORATION

SCALE:	APPROVED BY:	DRAWN BY DR
DATE: 1-70		REVISED

FOOTING DETAILS

TKD-200 SERIES

DRAWING NUMBER C035-025

11X17 PRINTED ON NO. 1000H CLEARPRINT

Tri-Ex®

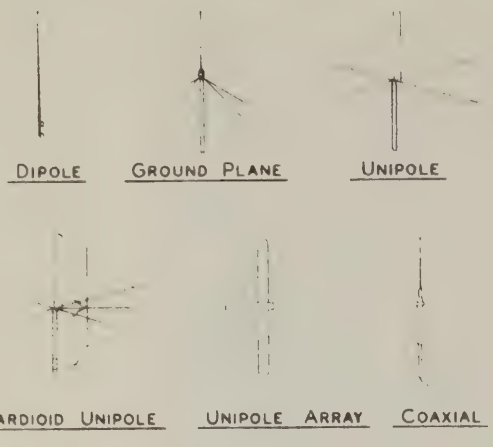
TOWER CORPORATION

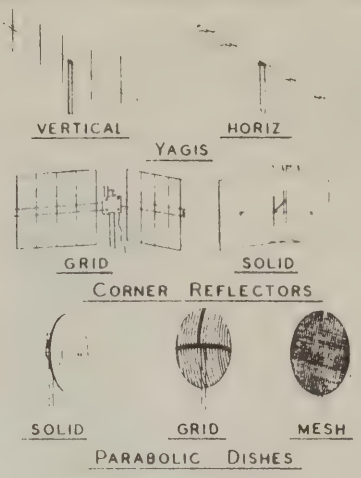
7182 Rasmussen Ave.
Visalia, Calif. 93277

The Square Rigger tower. Erected in Downey, California. Part of a microwave system in Los Angeles County. This microwave relay tower is a Tri-Ex Square Rigger TKD-4-100. Rock-solid stable.

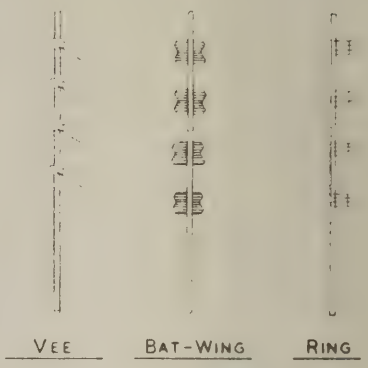
COMMUNICATION ANTENNAS

AMATEUR & 2-WAY COMMUNICATION



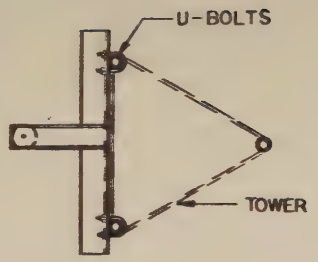


TV & FM-BROADCAST-VHF



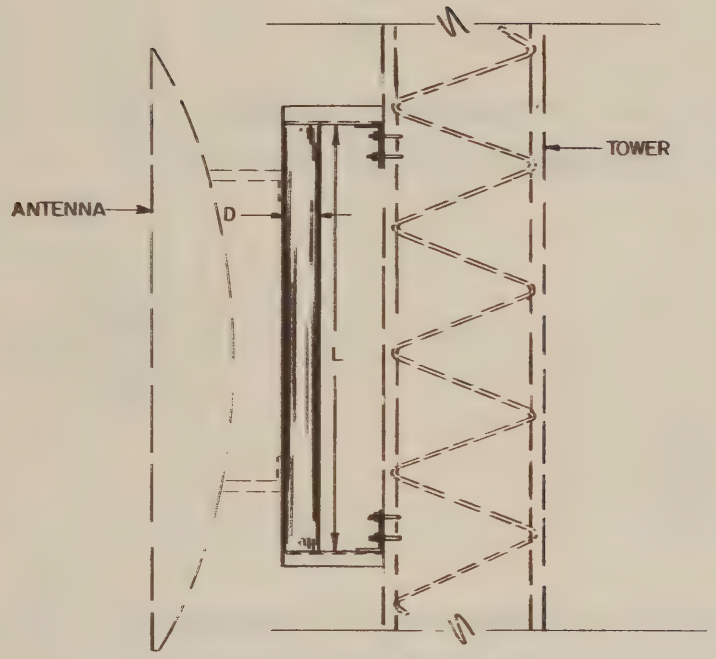
TYPE	FREQ. - MC OR SIZE	AREA SQ. FT.	WEIGHT LBS.	REMARKS
DI POLE	30-50	3.125	80	
	144-470	2.5	60	
GROUND PLANE	25-50	2.1	25	
	148-424	.5	15	
UNIPOLE	25-50	1.5	25	
	44-100	1.0	20	
	100-470	.5	10	
CARDIOID UNIPOLE	25-35	2.7	60	
	35-50	1.8	50	
	148-174	.5	10	
UNIPOLE ARRAY	30-35	7.2	70	
	40-50	4.8	65	
	148-174	3.1	32	
COAXIAL	30-40	1.5	40	
	40-150	1.0	35	
	150-174	.5	25	
YAGIS	15-40	10.7-(H),13.4-(V)	60	
	40-60	9.5 " 11.9 "	50	
	60-75	6.0 " 7.5 "	40	
	75-100	4.5 " 5.6 "	30	
	100-200	2.0 " 2.5 "	20	
CORNER REFLECTORS	72-76	6.3	100	SOLID-AREA SHOWN GRID-AREA X .5
	144-174	3.8	90	
	450-470	3.0	80	
	952-960	2.0	20	
PARABOLIC DISHES	4 FT. DIA.	12	60	SOLID-AREA SHOWN MESH-AREA X .8 GRID-AREA X .2 RADOME-AREA X .5
	6 " "	28	95	
	8 " "	50	150	
	10 " "	78	200	
T.V. & FM BROADCAST	54-72, CH.2-4			SEE ANTENNA MFG. FOR DESIGN DATA (AREA, WEIGHT, ETC.)
	76-88, CH. 5-6			
	88-108, FM			
	174-216, CH.7-13			
	470-890,CH.14-83			

NOTE: ALL AREAS AND WEIGHTS GIVEN ARE NOMINAL AVERAGES.

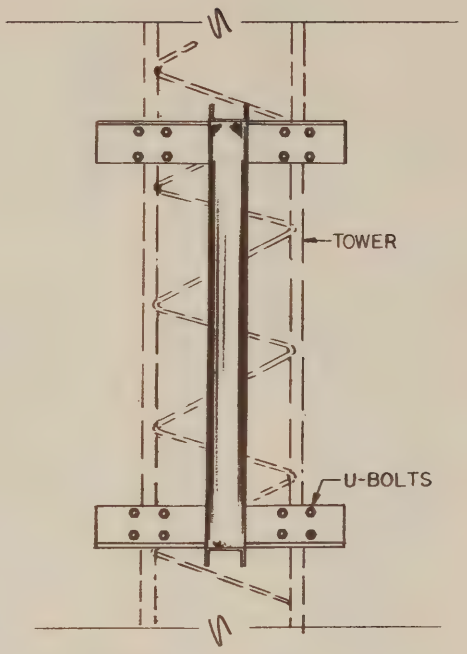


PLAN VIEW

MODEL	L	D	DISH SIZE
DSM—9	30"	2 7/8"	2'— 4'
DSM—15	30"	2 7/8"	2'-4'-6'
DSM—20	53"	4 1/2"	6'-8'
DSM—26	53"	4 1/2"	6'-8'-10'



SIDE VIEW



FRONT VIEW

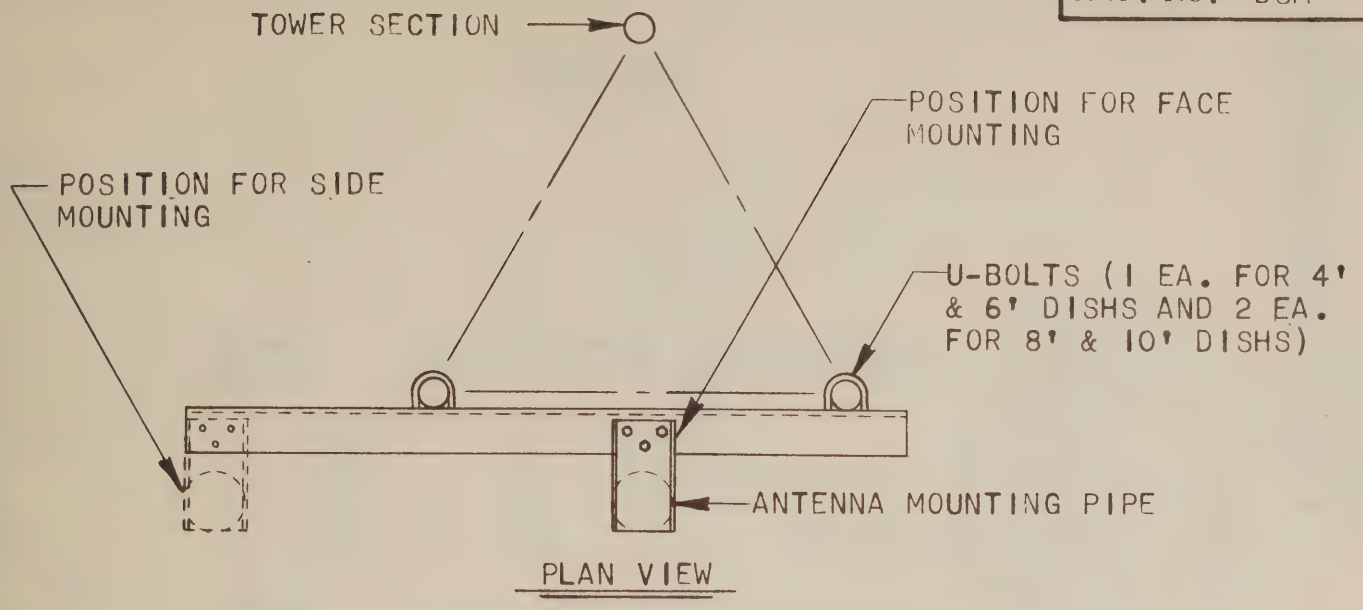
TRI-EX TOWER CORPORATION

SCALE:	APPROVED BY:	DRAWN BY D B
DATE: 8-28-69		REVISED

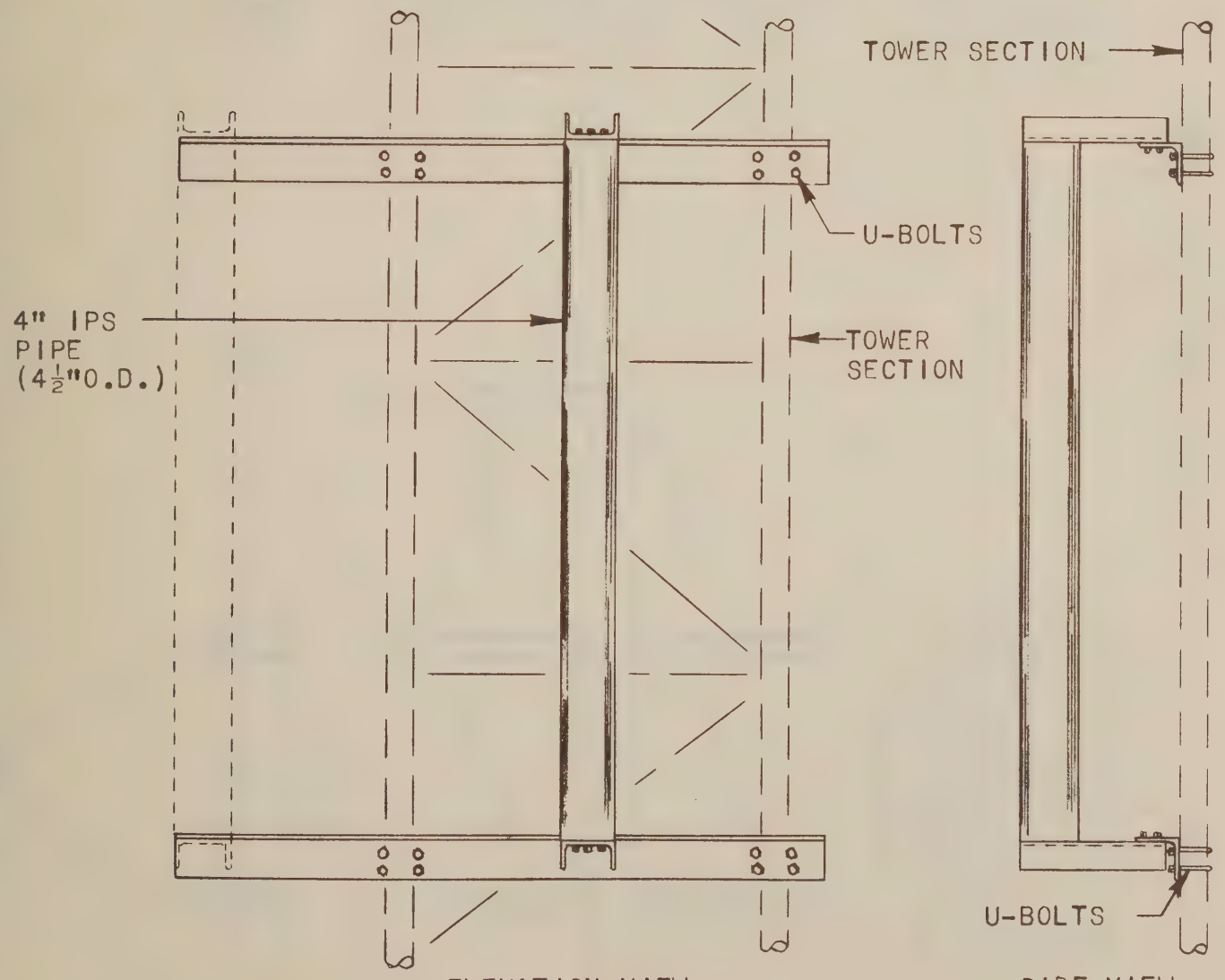
DISH MOUNTING BRACKET

DRAWING NUMBER C 095-009

REF. NO. DSM


TOWER SECTION
POSITION FOR FACE MOUNTING
POSITION FOR SIDE MOUNTING
U-BOLTS (1 EA. FOR 4' & 6' DISHS AND 2 EA. FOR 8' & 10' DISHS)
ANTENNA MOUNTING PIPE

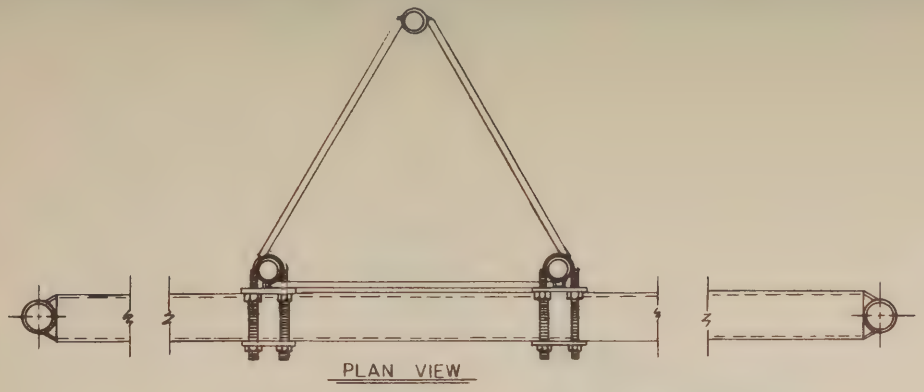
PLAN VIEW



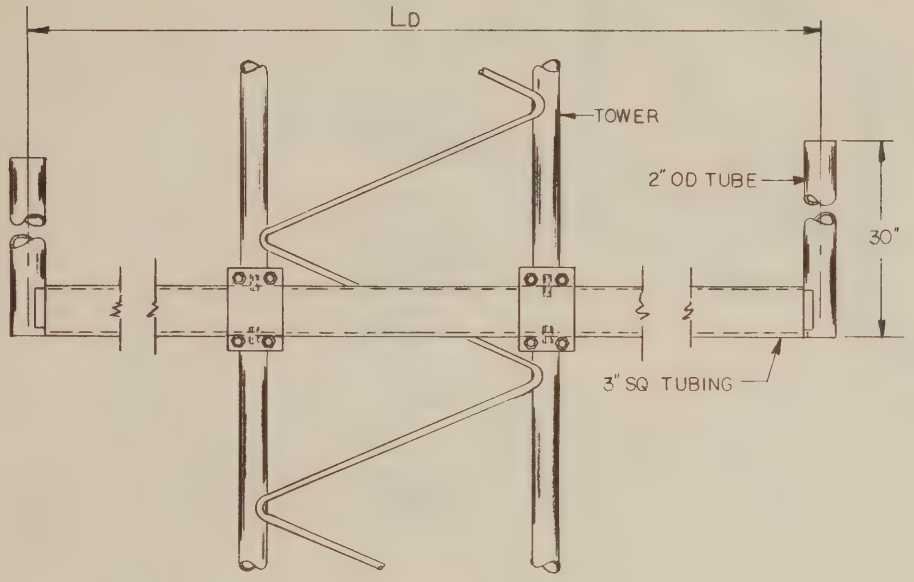
ELEVATION VIEW

SIDE VIEW

Tri-Ex TOWER CORPORATION 7182 RASMUSSEN AVE., VISALIA, CALIF.	TITLE: DISH MOUNT ASSEMBLY FOR T-36 & T-48 TOWERS	ISSUE: A/10/71 SHEET NO. 1

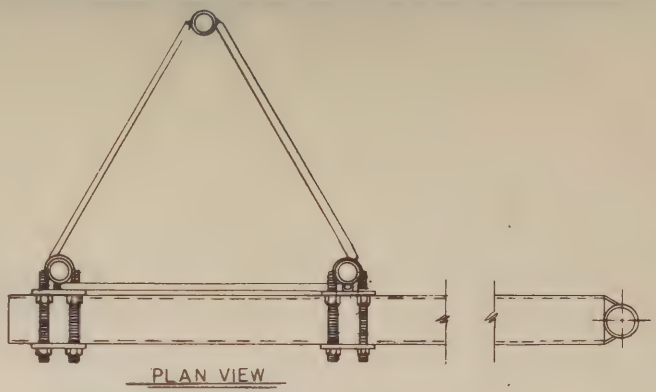


PLAN VIEW

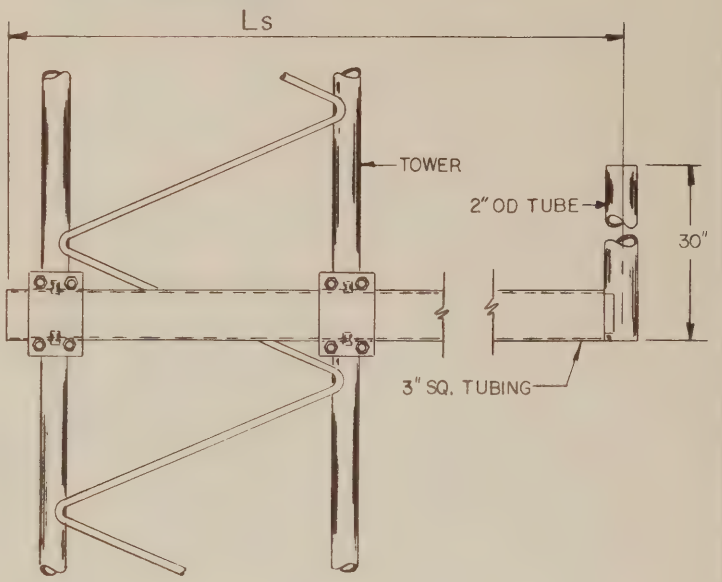


ELEVATION VIEW

DUAL ANTENNA MOUNT		
MODEL	LENGTH (Lo)	WEIGHT
SA-8-2	96"	51 LB.
SA-9-2	108"	55 LB.
SA-10-2	120"	58 LB.
SA-11-2	132"	61 LB.
SA-12-2	144"	65 LB.



PLAN VIEW



ELEVATION VIEW

SINGLE ANTENNA MOUNT		
MODEL	LENGTH (Ls)	WEIGHT
SA-4-1	48"	32 LB.
SA-5-1	60"	36 LB.
SA-6-1	72"	39 LB.
SA-7-1	84"	42 LB.
SA-8-1	96"	45 LB.

NOTE: SPECIFY O.D. OF TOWER LEG. $1\frac{1}{2}$" OD AND 2"OD U-CLAMPS ARE AVAILABLE

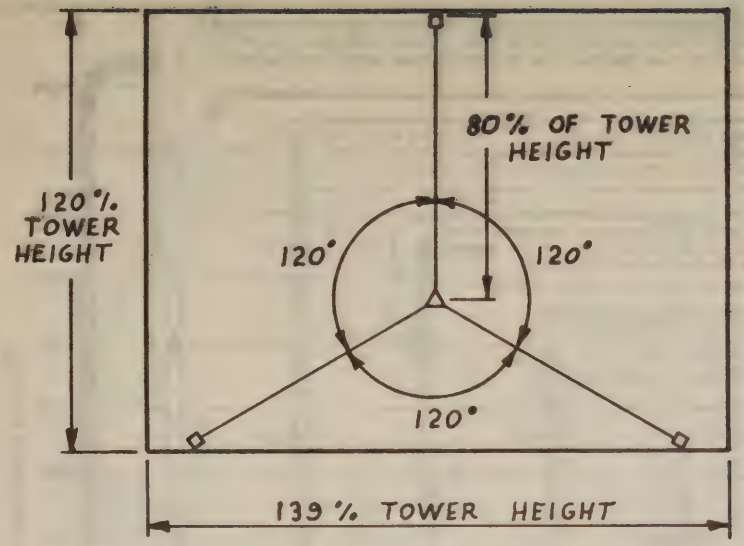
TRI-EX TOWER CORPORATION

SCALE:	APPROVED BY:	DRAWN BY DB
DATE: 8-12-69		REVISED

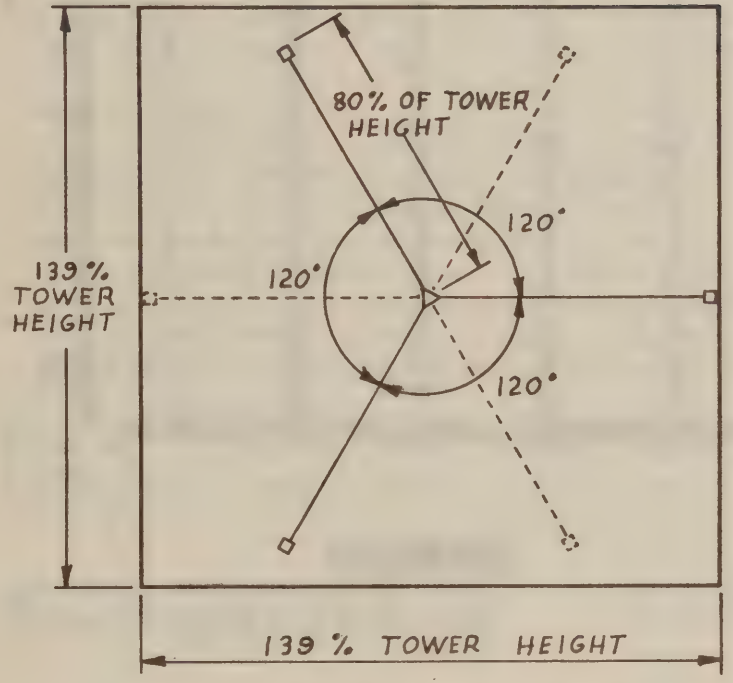
ANTENNA SIDE ARM MOUNT

DRAWING NUMBER C 095-001

17X22 PRINTED ON NO. 1000H CLEARPRINT



MINIMUM AREA

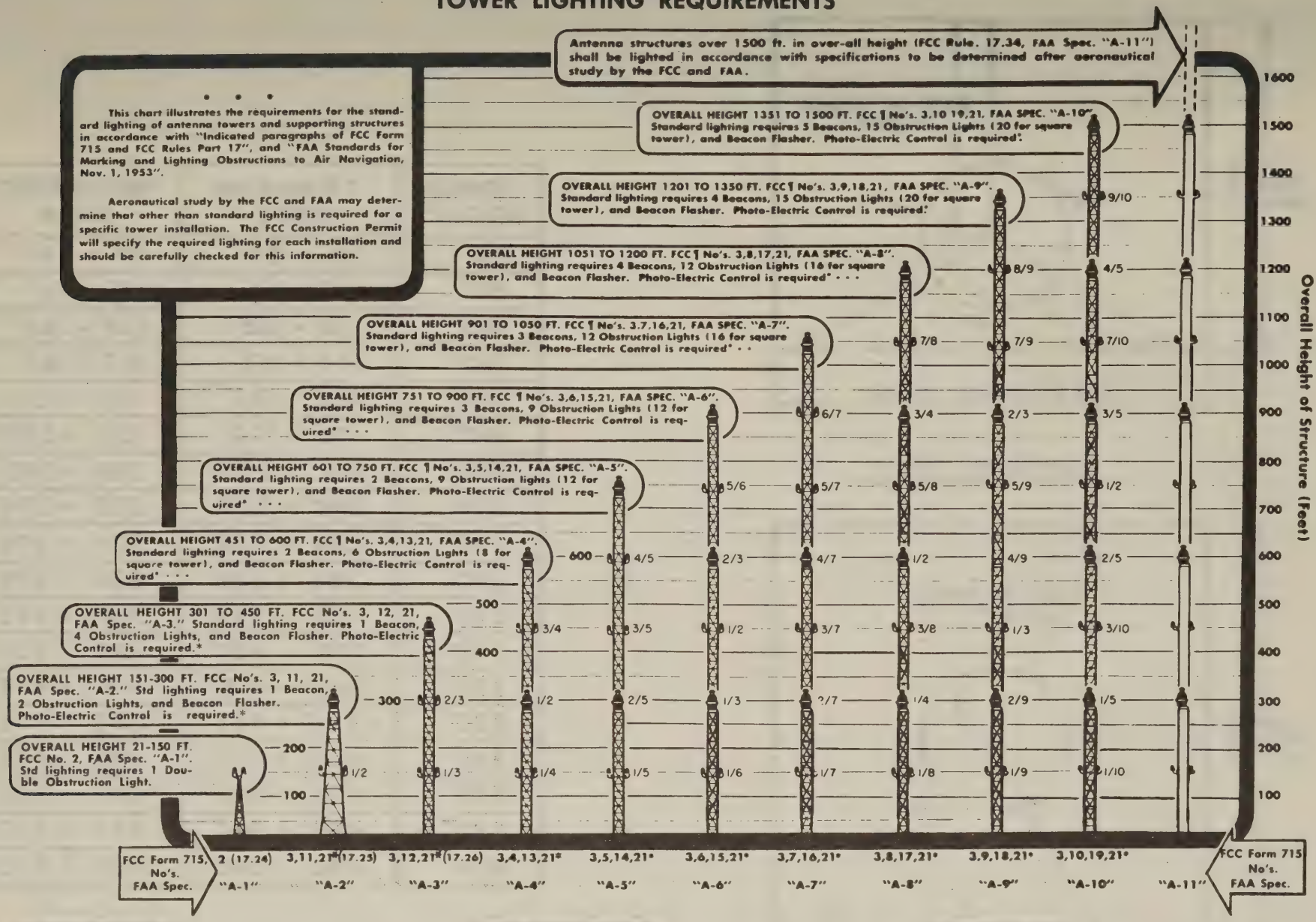


PREFERRED AREA

TOWER HEIGHT	MINIMUM AREA	PREFERRED AREA
60'	72' × 84'	84' × 84'
80'	96' × 111'	111' × 111'
100'	120' × 139'	139' × 139'
120'	144' × 167'	167' × 167'
140'	168' × 195'	195' × 195'
160'	192' × 222'	222' × 222'
180'	216' × 250'	250' × 250'
200'	240' × 278'	278' × 278'
220'	264' × 306'	306' × 306'
240'	288' × 334'	334' × 334'
260'	312' × 362'	362' × 362'
280'	336' × 390'	390' × 390'
300'	360' × 418'	418' × 418'
320'	384' × 445'	445' × 445'
340'	408' × 472'	472' × 472'
360'	432' × 502'	502' × 502'
380'	456' × 532'	532' × 532'
400'	480' × 560'	560' × 560'

AREA REQUIRED FOR GUYED TOWERS

TOWER LIGHTING REQUIREMENTS


Antenna structures over 1500 ft. in over-all height (FCC Rule. 17.34, FAA Spec. "A-11") shall be lighted in accordance with specifications to be determined after aeronautical study by the FCC and FAA.
This chart illustrates the requirements for the standard lighting of antenna towers and supporting structures in accordance with "Indicated paragraphs of FCC Form 715 and FCC Rules Part 17", and "FAA Standards for Marking and Lighting Obstructions to Air Navigation, Nov. 1, 1953".
Aeronautical study by the FCC and FAA may determine that other than standard lighting is required for a specific tower installation. The FCC Construction Permit will specify the required lighting for each installation and should be carefully checked for this information.
OVERALL HEIGHT 1351 TO 1500 FT. FCC ¶ No's. 3,10 19,21, FAA SPEC. "A-10". Standard lighting requires 5 Beacons, 15 Obstruction Lights (20 for square tower), and Beacon Flasher. Photo-Electric Control is required*.
OVERALL HEIGHT 1201 TO 1350 FT. FCC ¶ No's. 3,9,18,21, FAA SPEC. "A-9". Standard lighting requires 4 Beacons, 15 Obstruction Lights (20 for square tower), and Beacon Flasher. Photo-Electric Control is required*.
OVERALL HEIGHT 1051 TO 1200 FT. FCC ¶ No's. 3,8,17,21, FAA SPEC. "A-8". Standard lighting requires 4 Beacons, 12 Obstruction Lights (16 for square tower), and Beacon Flasher. Photo-Electric Control is required* • • •
OVERALL HEIGHT 901 TO 1050 FT. FCC ¶ No's. 3,7,16,21, FAA SPEC. "A-7". Standard lighting requires 3 Beacons, 12 Obstruction Lights (16 for square tower), and Beacon Flasher. Photo-Electric Control is required* • •
OVERALL HEIGHT 751 TO 900 FT. FCC ¶ No's. 3,6,15,21, FAA SPEC. "A-6". Standard lighting requires 3 Beacons, 9 Obstruction Lights (12 for square tower), and Beacon Flasher. Photo-Electric Control is required* • • •
OVERALL HEIGHT 601 TO 750 FT. FCC ¶ No's. 3,5,14,21, FAA SPEC. "A-5". Standard lighting requires 2 Beacons, 9 Obstruction lights (12 for square tower), and Beacon Flasher. Photo-Electric Control is required* • • •
OVERALL HEIGHT 451 TO 600 FT. FCC ¶ No's. 3,4,13,21, FAA SPEC. "A-4". Standard lighting requires 2 Beacons, 6 Obstruction Lights (8 for square tower), and Beacon Flasher. Photo-Electric Control is required* • • •
OVERALL HEIGHT 301 TO 450 FT. FCC No's. 3, 12, 21, FAA Spec. "A-3." Standard lighting requires 1 Beacon, 4 Obstruction Lights, and Beacon Flasher. Photo-Electric Control is required.*
OVERALL HEIGHT 151-300 FT. FCC No's. 3, 11, 21, FAA Spec. "A-2." Std lighting requires 1 Beacon, 2 Obstruction Lights, and Beacon Flasher. Photo-Electric Control is required.*
OVERALL HEIGHT 21-150 FT. FCC No. 2, FAA Spec. "A-1". Std lighting requires 1 Double Obstruction Light.
Overall Height of Structure (Feet)
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1/2
1/3
1/4
1/5
1/6
1/7
1/8
1/9
1/10
2/3
2/5
2/7
2/9
3/4
3/5
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4/9
5/6
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7/9
7/10
8/9
9/10
1/2
FCC Form 715, FAA Spec. No's.
2 (17.24) 3,11,21* (17.25) 3,12,21* (17.26) 3,4,13,21* 3,5,14,21* 3,6,15,21* 3,7,16,21* 3,8,17,21* 3,9,18,21* 3,10,19,21*
"A-1" "A-2" "A-3" "A-4" "A-5" "A-6" "A-7" "A-8" "A-9" "A-10" "A-11"
FCC Form 715 No's. FAA Spec.

DAILY INSPECTION

FCC Rule 17.37 requires that the licensee..(1) shall make an observation of the tower lights at least once each 24 hours, either visually or by observing an automatic..indicator or alternatively (2) shall provide..an automatic alarm system.

LAMP SOCKET VOLTAGES

FAA "Standards for Marking and Lighting Obstructions to Air Navigation, Nov. 1, 1953" specifies that the lamp socket voltage correspond to or be within 3% of the rated voltage of the lamp used.

CABLE SUPPORTS

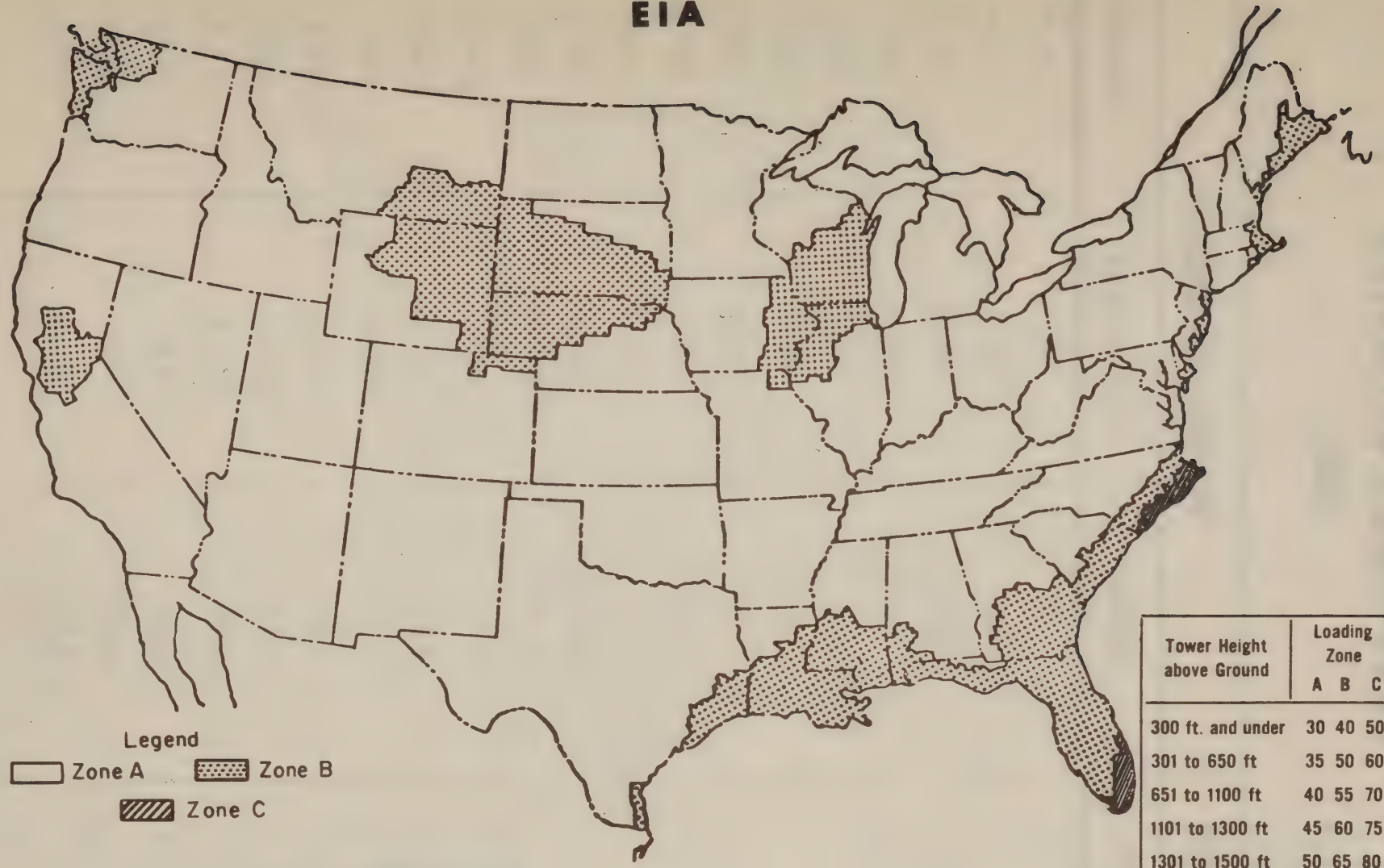
The National Electrical Code specifies that conductors in vertical runs shall not be supported by terminals . . . and that cable supports shall be provided in each vertical run, and at intervals not greater than 100 ft.

* FCC Form 715, Paragraph 21, states: "All lights shall burn continuously or shall be controlled by a light-sensitive device."

Courtesy Hughey & Phillips, Inc.

MAP OF WIND LOADING ZONES

EIA



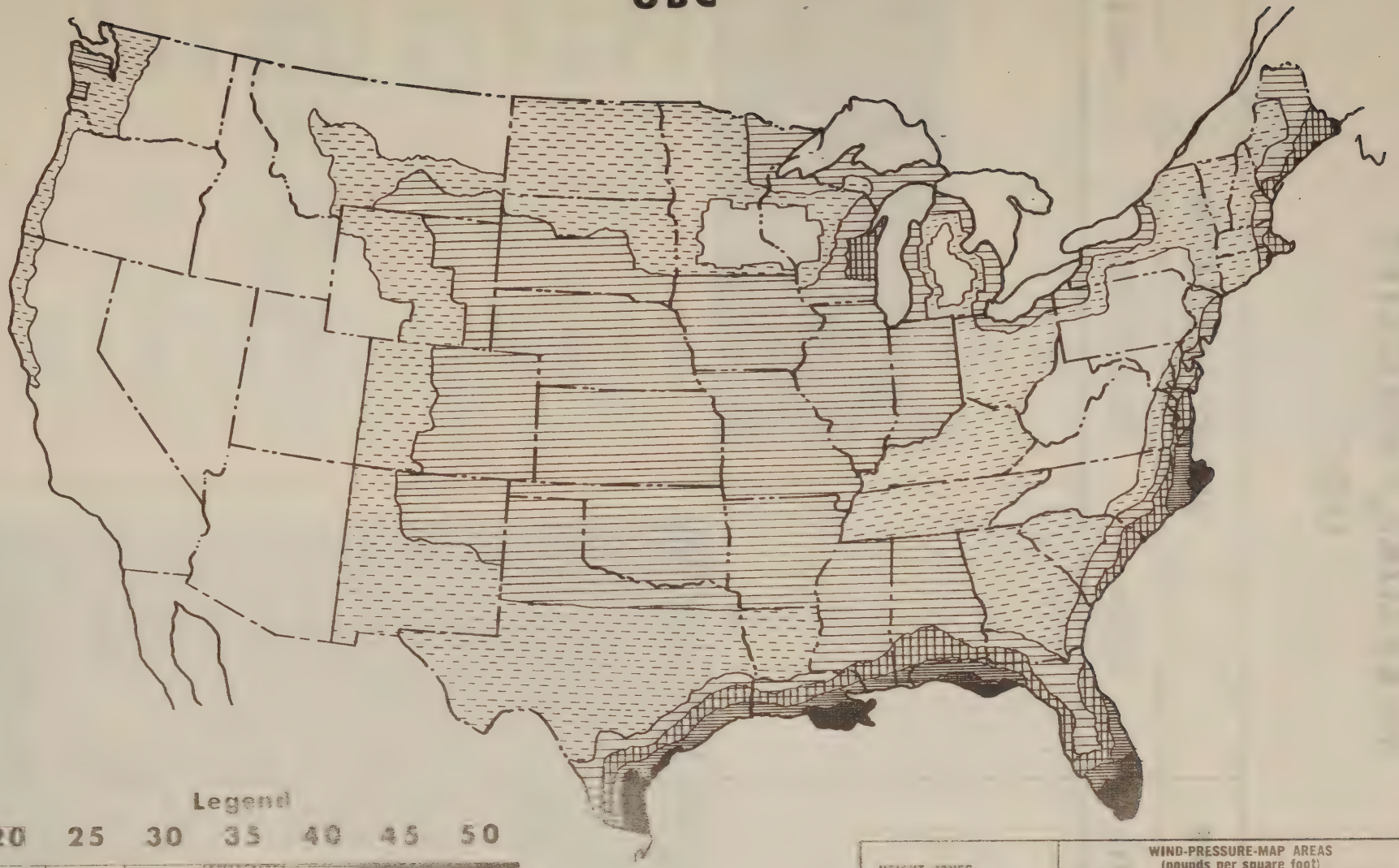
Tower Height above Ground	Loading Zone A	B	C
300 ft. and under	30	40	50
301 to 650 ft	35	50	60
651 to 1100 ft	40	55	70
1101 to 1300 ft	45	60	75
1301 to 1500 ft	50	65	80
1501 to 1700 ft	55	70	85
Over 1700 ft	60	75	90

WIND
PRESSURE/VELOCITY
EIA

PRESSURE	WIND VELOCITY		
LBS./SQ. FT.	MILES	KILOMETERS	KNOTS
.40	10	16.1	8.7
1.60	20	32.2	17.4
3.60	30	48.3	26.1
6.40	40	64.4	34.7
10.00	50	80.5	43.4
14.40	60	96.6	52.1
19.60	70	112.6	60.8
25.60	80	128.7	69.5
32.40	90	144.8	78.2
40.00	100	160.9	86.8
48.40	110	177.0	95.5
57.60	120	193.1	104.2
67.50	130	209.2	112.9
78.30	140	225.3	121.6
90.00	150	241.4	130.2
102.40	160	257.5	138.9
115.60	170	273.6	147.6
129.60	180	289.7	156.3
144.40	190	305.8	165.0
160.00	200	321.8	173.7

MAP OF WIND LOADING ZONES

UBC



Legend

20 25 30 35 40 45 50

psf

HEIGHT ZONES in feet	WIND-PRESSURE-MAP AREAS (pounds per square foot)						
	20	25	30	35	40	45	50
Less than 30	15	20	25	25	30	35	40
[illegible] 30	20	25	30	35	40	45	50
[illegible] 60	25	30	40	45	50	55	60
[illegible] 120	30	40	45	55	60	70	75
[illegible] 120	35	45	55	60	70	80	90
[illegible] and over	40	50	60	70	80	90	100

WIND
PRESSURE/VELOCITY
UBC

PRESSURE	WIND VELOCITY		
LBS./SQ.FT.	MILES	KILOMETERS	KNOTS
.33	10	16.1	8.7
1.32	20	32.2	17.4
2.98	30	48.3	26.1
5.30	40	64.4	34.7
8.26	50	80.5	43.4
11.90	60	96.6	52.1
16.20	70	112.6	60.8
21.10	80	128.7	69.5
27.80	90	144.8	78.2
33.00	100	160.9	86.8
40.00	110	177.0	95.5
47.50	120	193.1	104.2
55.90	130	209.2	112.9
64.70	140	225.3	121.6
74.20	150	241.4	130.2
84.48	160	257.5	138.9
95.37	170	273.6	147.6
106.92	180	289.7	156.3
119.13	190	305.8	165.0
132.00	200	321.8	173.7

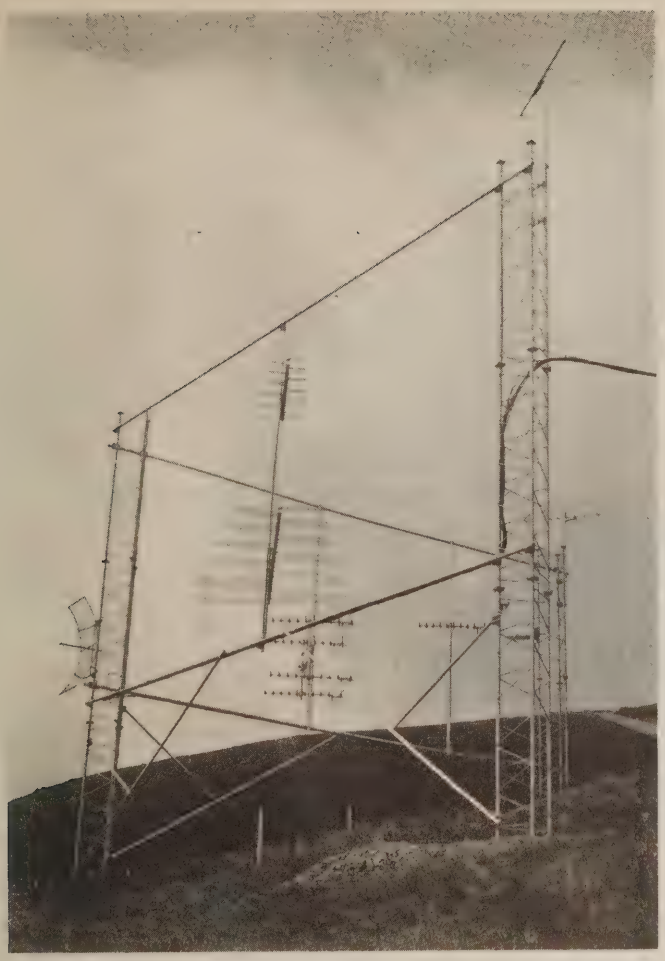
MODEL TKD-100 SERIES
FREE STANDING TOWER
FOR MICROWAVE SYSTEM

TOWER SHOWN WITH 8 FOOT
DIAMETER PARABOLIC ANTENNAS
MOUNTED BACK TO BACK

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

MODEL TKD-100/26
100 FOOT FREE STANDING TOWER
FOR CATV SYSTEM

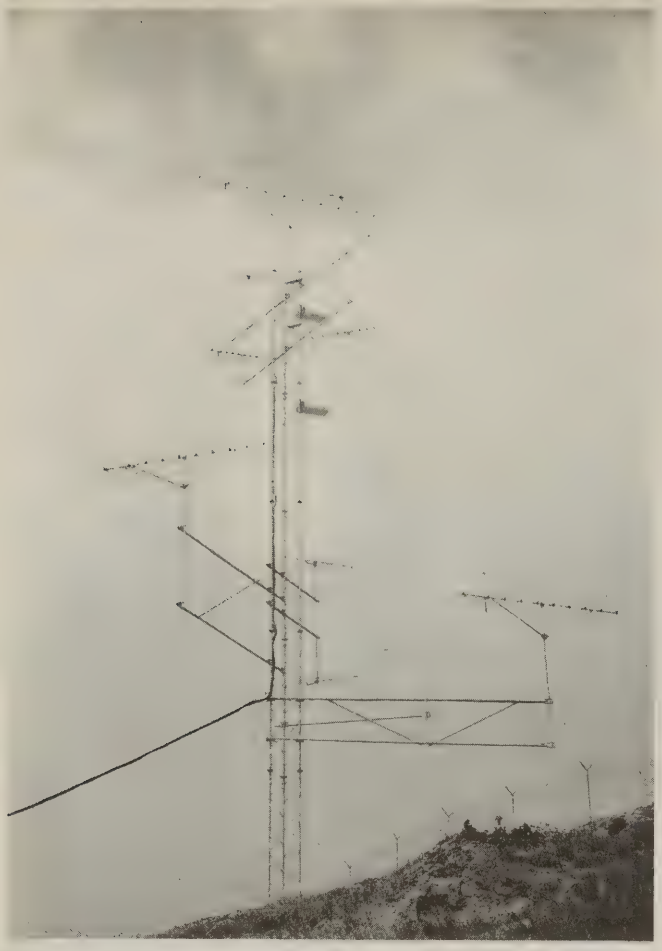
MODEL T-26
50 FOOT GUYED H TOWER SYSTEM
FOR CATV



MODEL T-26
30 FOOT FREE STANDING TOWERS
FOR CATV SYSTEM

MODEL T-20
80 FOOT GUYED H TOWER SYSTEM
FOR CATV

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF. 93277



MODEL T-26
50 FOOT FREE STANDING TOWER
FOR CATV SYSTEM

MODEL T-26
40 FOOT FREE STANDING TOWER
FOR MICROWAVE

GUYED
CRANK-UP
TOWERS

Tri-Ex® TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

HOW TO RECOMMEND THE CORRECT CRANK-UP TOWER

1. GUYED OR SELF-SUPPORTING
2. DEAD LOAD
3. ANTENNA WIND LOAD
4. TYPE OF ROTATOR TO BE USED
5. HEIGHT OF TOWER

GUYED CRANK-UP TOWERS

TOWER SERIES	AVAILABLE MODELS	MAXIMUM DEAD LOAD CAPACITY	MAXIMUM ANTENNA WIND LOAD (1)	ROTATOR MOUNTING LOCATION
T	11	75 LB.	3 SQ. FT.	CDR MODELS TOP MOUNTED
THD	10	125 LB.	7 SQ. FT.	CDR MODELS INSIDE TOP SECTION (2)
H	3	160 LB.	11 SQ. FT	CDR MODELS & SMALL PROP-PITCH INSIDE TOP SECTION. TELREX TOP MOUNTED (3)
HS	5	250 LB.	14 SQ. FT.	

(1) WIND LOAD CENTERED AT 2 FEET ABOVE TOP OF TOWER IN 78 MPH WINDS.
(2) TOP SECTION WILL NEST ONLY TO ROTATOR LEVEL. THD-6105 & THD-7122 REQUIRE TOP MOUNTED ROTATOR.
(3) H SERIES TOP SECTION WILL NEST ONLY TO PROP-PITCH LEVEL.

SELF-SUPPORTING CRANK-UP TOWERS

TOWER SERIES	AVAILABLE MODELS	MAXIMUM DEAD LOAD CAPACITY	MAXIMUM ANTENNA WIND LOAD (4)	ROTATOR MOUNTING LOCATION
W	5	150 LB.	9 SQ. FT. (50 MPH WINDS)	CDR MODELS INSIDE TOP SECTION
LM	3	LM-237 LM-354 250 LB.	16 SQ. FT.	CDR MODELS & SMALL PROP-PITCH INSIDE TOP SECTION. TELREX TOP MOUNTED
		LM-470 350 LB.		
HM	2	400 LB.	22 SQ. FT.	
HZN	4	275 LB.	12 SQ. FT.	
HZRN	3	400 LB. (5)	18 SQ. FT.	NONE REQUIRED TOWER ROTATES

(4) WIND LOAD CENTERED AT 2 FEET ABOVE TOP OF TOWER IN 60 MPH WINDS
(5) BASED ON STACKED ANTENNAS, WITH ONE ANTENNA MOUNTED ON SECOND SECTION FROM TOP.

AMATEUR ANTENNAS

Hy-Gain Antenna Wind Loads

Model	Weight Lb.	Sq. Ft.	Model	Weight Lb.	Sq. Ft.
TH2MK3	22.0	3.8	153BA	16.3	3.0
TH3 Jr.	20.0	3.4	155B	167.0	6.3
TH3MK3	35.0	5.1	215B	14.1	2.0
TH6DXX	57.0	8.09	23	3.2	0.4
Hy-Quad	42.0	8.4	28	7.2	0.8
203BA	30.0	5.38	611B	94.0	7.3
204B	116.0	6.85	63B	6.8	1.25
204BA	50.0	7.27	64B	9.5	1.47
205B	185.0	11.0	66B	23.4	3.25
402BA	47.5	5.95	DB1015A	27.0	4.25
403B	250.0	23.6	DB24B	64.0	10.5
103BA	10.0	2.0	DB62	11.3	2.2
106B	153.0	5.9	LP62	33.0	3.6

Mosley Antenna Wind Loads

TA-33	37.0	5.7	S-402	60.0	7.0
TA-33 Jr.	20.0	4.3	S-401	25.0	3.5
TA-32	24.0	3.7	MP-33	23.0	4.7
TA-32 Jr.	14.0	3.1	X-15	13.0	3.2
TA-31	10.0	2.0	MCQ-3B		7.8
TA-31 Jr.	9.0	1.5	MCQ-10		4.5
TA-36	69.0	10.7	MCQ-15		5.8
Classic 33	42.0	6.0	MCQ-20		7.8
Classic 10/15	32.5	5.7	A-56-S	7.5	1.3
A-310-C	16.0	3.0	A-76-S	12.0	2.5
A-315-C	22.0	4.0	A-96-S	8.0	1.3
A-203-C	40.0	7.0			

Telrex Antenna Wind Loads

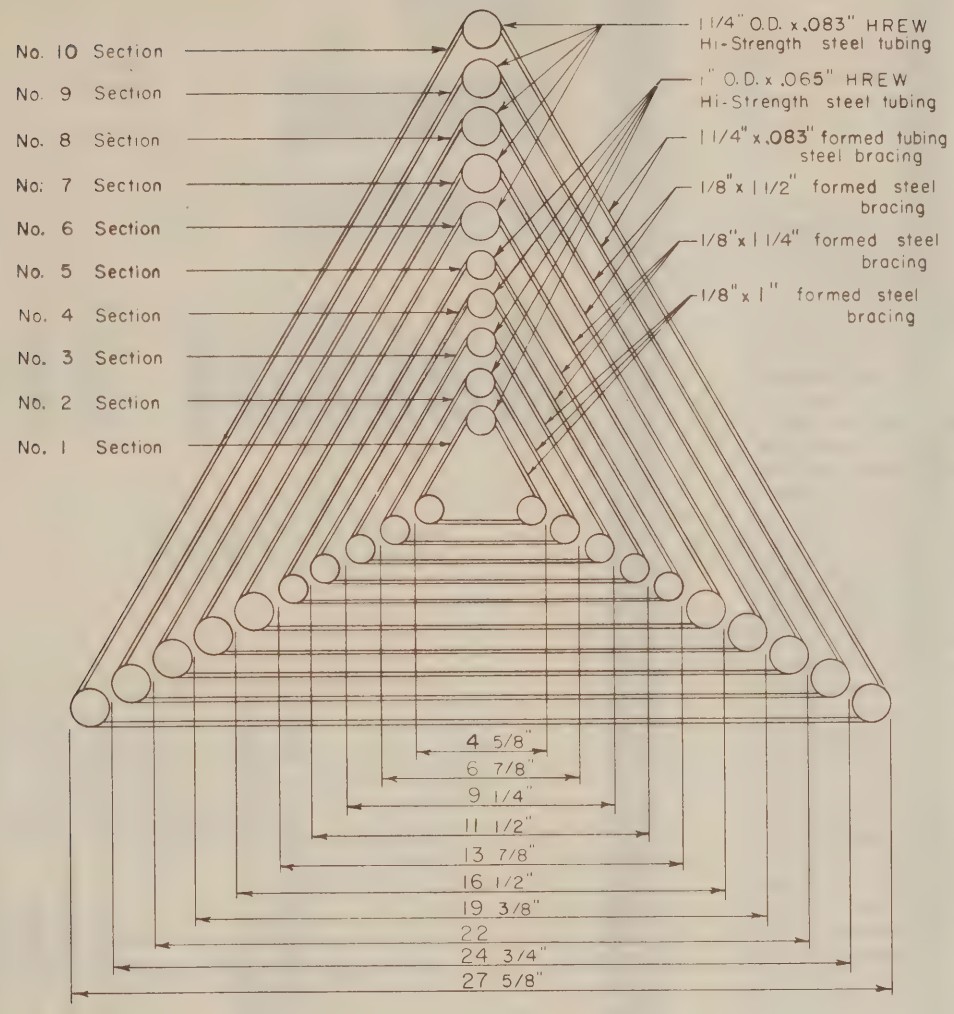
10M-313	21.5	2.8	20M-326	48.0	5.9
10M-518	30.0	3.2	20M-536	113.0	13.6
10M-523	65.0	4.5	20M-546	150.0	14.1
10M-636	81.0	5.5	40M-24	66.0	7.0
15M-317	37.0	3.6	40M-214	60.0	8.0
15M-525	74.0	7.8	40M-329	92.0	12.6
15M-532	95.0	10.0	40M-335	150.0	15.0
20M-317	48.0	5.9			

Wilson Antenna Wind Loads

M510	38	4.2	M240	67	10.0
M810	75	7.0	M340	145	15.0
M415	40	5.1	DB32	52	8.5
M615	65	7.7	DB43	78	11.5
M715	80	9.5	DB44	52	9.0
M320	41	6.0	DB52	135	20.5
M420	41	8.0	DB54	115	15.5
M520	85	10.5	DB62	158	22.5
M620	110	12.5	DB65	85	11.7
M720	135	13.8	DB76	110	14.0

CROSS SECTION DETAILS OF BASIC TOWER SECTIONS

TRI-EX TOWER CORP.



TOWER MODEL	SECTIONS USED	HEIGHT		TOWER MODEL	SECTIONS USED	HEIGHT	
		EXTD.	COLL.			EXTD.	COLL.
T-218	No. 1-2	18'	10'-3"	THD-237	No. 3-4	37'	20'-3"
T-327	No. 1-2-3	27'	10'-6"	THD-354	No. 3-4-5	54'	20'-6"
T-436	No. 1-2-3-4	36'	10'-9"	THD-471	No. 3-4-5-6	71'	20'-10"
T-545	No. 1-2-3-4-5	45'	11'-0"	THD-588	No. 3-4-5-6-7	88'	21'-4"
T-652	No. 1-2-3-4-5-6	52'	11'-4"	THD-6105	No. 2-3-4-5-6-7	105'	21'-10"
T-761	No. 1-2-3-4-5-6-7	61'	11'-9"	THD-7122	No. 1-2-3-4-5-6-7	122'	22'-4"
T-120	No. 2	20'	20'-0"	H-237	No. 4-5	37'	20'-4"
T-237	No. 1-2	37'	20'-3"	H-354	No. 4-5-6	54'	20'-8"
T-354	No. 1-2-3	54'	20'-5"	H-471	No. 4-5-6-7	71'	21'-0"
T-471	No. 1-2-3-4	71'	20'-8"	HS-237	No. 5-6	37'	20'-5"
T-588	No. 1-2-3-4-5	88'	21'-0"	HS-354	No. 5-6-7	54'	20'-10"
THD-218	No. 3-4	18'	10'-3"	HS-471	No. 5-6-7-8	71'	21'-5"
THD-326	No. 3-4-5	26'	10'-6"	HS-588	No. 5-6-7-8-9	88'	22'-0"
THD-434	No. 3-4-5-6	34'	10'-10"	HS-6105	No. 5-6-7-8-9-10	105'	22'-6"
THD-542	No. 3-4-5-6-7	42'	11'-4"				

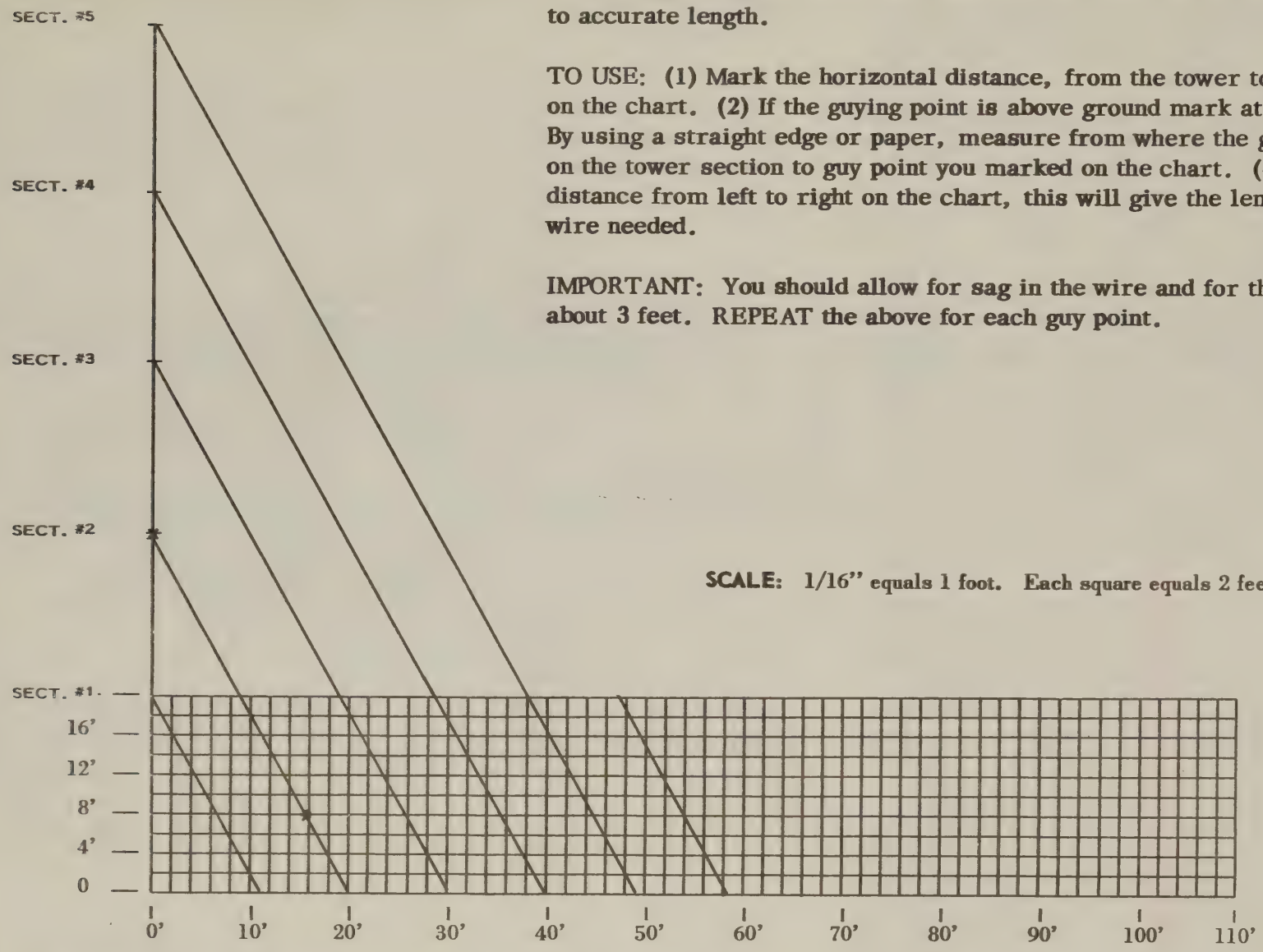
These cross reference charts enable you to determine the size of each of the Tower sections on Tri-Ex guyed Towers. To determine the sizes of the various Tower models, first locate the proper Tower in the reference chart. Under the heading "Sections Used", please note that each section used in the various model Towers are given. You may then refer to the cross section details to determine the sizes and dimensions of the various sections used with each Tower. Please note that all structural details are given, including size of upright members and braces. In addition, the extended height and collapsed height is given for your convenience.

GUYING CHART

This chart is supplied with each tower to facilitate the cutting of guy wires to accurate length.

TO USE: (1) Mark the horizontal distance, from the tower to the guying point, on the chart. (2) If the guying point is above ground mark at that height. (3) By using a straight edge or paper, measure from where the guy wire fastens on the tower section to guy point you marked on the chart. (4) Measuring this distance from left to right on the chart, this will give the length in feet of guy wire needed.

IMPORTANT: You should allow for sag in the wire and for the ties - usually about 3 feet. REPEAT the above for each guy point.



SCALE: 1/16" equals 1 foot. Each square equals 2 feet.

EXAMPLE: The guy point for Section # 2 is at a position 8 feet above the ground at a distance of 16 feet from the base of the Tower. Guy wire 33 feet plus 3 feet for sag and tie = 36 feet.

FOR FULL EFFECTIVENESS: The guy angle at the tower should never be less than 30 degrees.

improve talk power with a 37-TC TOWER

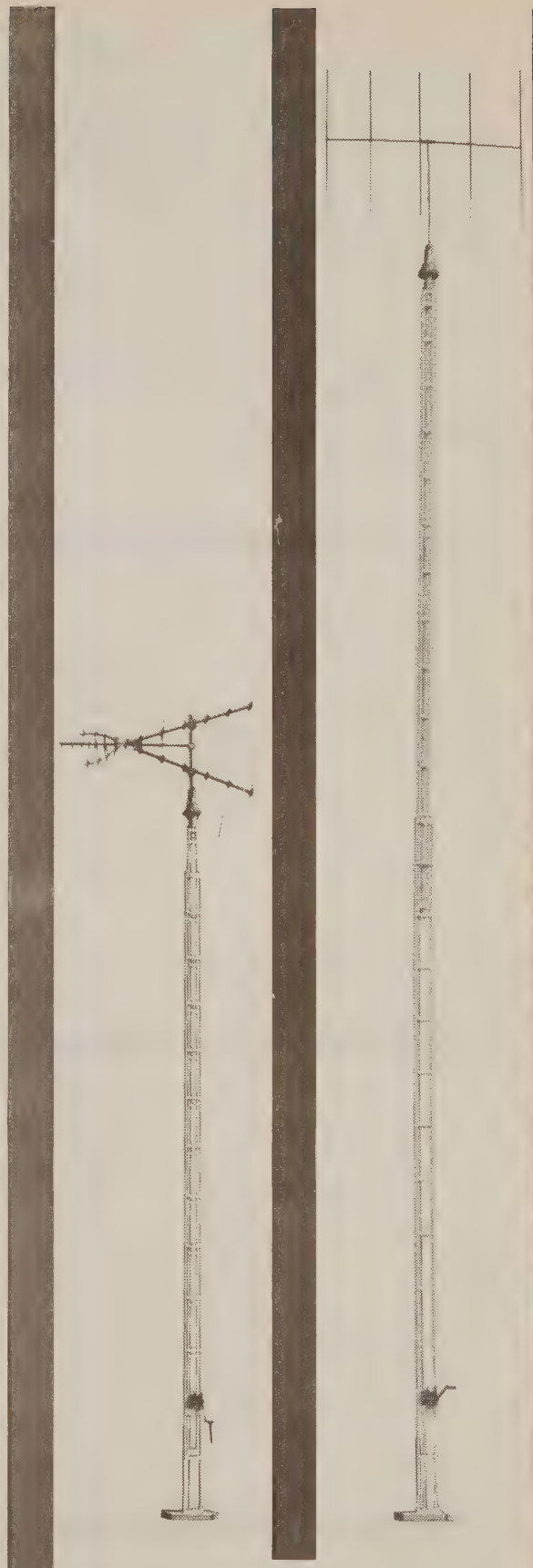
FEATURES...

- Complete with base tilt and mounting plate.
- Crank-up design allows easy access to your antenna.
- Mounting stub provided for rotator.
- Galvanized finish inside and outside for long lasting life.
- All steel construction.
- Supports 4 sq. ft. of antenna in 50 mph winds with top section unguyed. (80 mph winds with top section guyed)

MODEL	HEIGHT EXTENDED	HEIGHT NESTED	WEIGHT
37-TC	37 FT.	21 FT.	120 LB.

F.O.B., VISALIA, CALIF.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE.



BEAM & ROTOR MOUNTED

Nested Extended

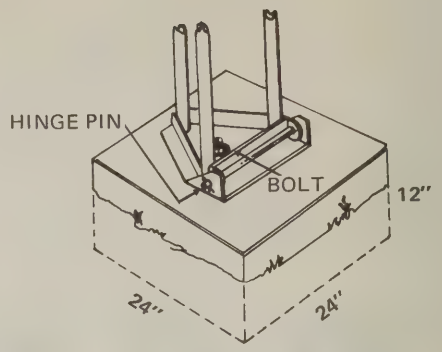
Tri-Ex® TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CA. 93277
PHONE: (209) 732-8383

8-72

INSTALLATION & ACCESSORIES

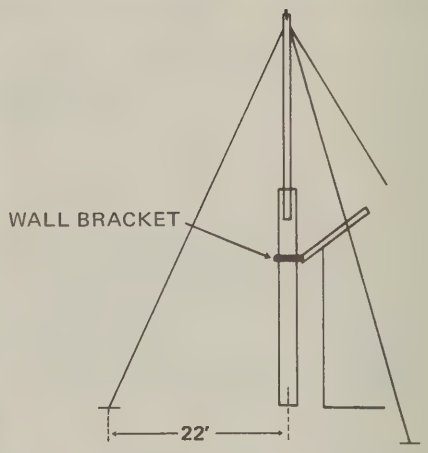
CONCRETE BASE DETAIL

1 EA. HINGED BASE PLATE
1 EA. FOUNDATION BOLT



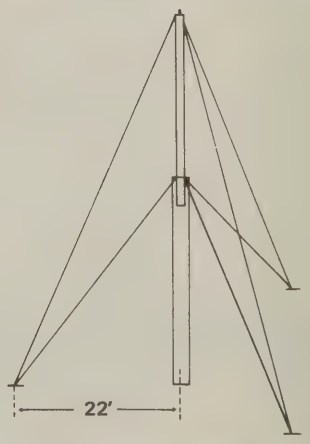
MODEL GK-1 GUY KIT

KIT CONTAINS:
150 FT. 1/8" 1x19 GALV. CABLE
12 EA. MA-180 CABLE CLAMP
3 EA. TH-316 THIMBLE
3 EA. H-16 TURNBUCKLE
1 EA. WB-2 WALL BRACKET



MODEL GK-2 GUY KIT

KIT CONTAINS:
250 FT. 1/8" 1x19 GALV. CABLE
24 EA. MA-180 CABLE CLAMP
6 EA. TH-316 THIMBLE
6 EA. H-16 TURNBUCKLE



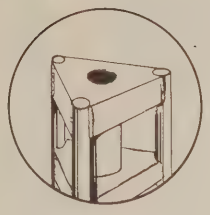
INDIVIDUAL ACCESSORY ITEMS

WB-2 WALL BRACKET - $7.95
AD-158 - BEAM MAST, 1-5/8" O.D.x4 FT. - $8.75

Tri-Ex® TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CA. 93277

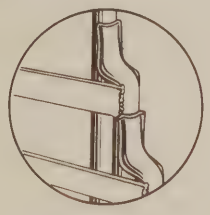
T SERIES

Crank-up TOWERS



TOP SECTION

To fit standard size 2" O.D. mast.

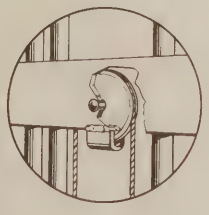


DIE FORMED GUIDES

End of tubing formed to insure minimum friction; designed to prevent binding in raising and lowering of tower. No moving parts.

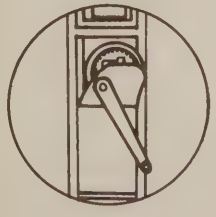
SAFETY STOPS

Constructed of heavy 3/16" steel relieves tension on cable when leaving tower extended for a long period of time.



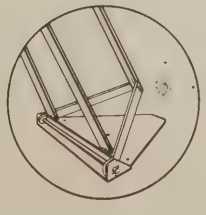
DURABLE PULLEY CONSTRUCTION

Sealed ball bearing aircraft pulleys used throughout. All crank up towers use rustproof, high strength aircraft cable.



PERMANENT WINCH

Built-in ratchet for ease and safety in cranking up tower.
Removable crank



HINGED BASE PLATE

Constructed of heavy gauge steel, hinged to facilitate mounting on slanting or straight surface.

TRI-EX "T" Series Light Weight, Tubular Steel Crank-Up Towers

. . . climbs effortlessly into the air with the turn of a crank.

Perfect for Antenna and Set Demonstration. Also ideal for Permanent Installation. Die formed guides are used to insure minimum friction. Designed and constructed to prevent binding in raising or lowering of tower. No moving parts. Safety stops constructed of 1½" x 3/16" steel relieves tension on cable. Electric welded construction. Ball bearing aircraft control type pulleys used throughout. Minimum 2000 lb. rust-proof aircraft cable. No bulky guy ring. Complete data on guying sent with each tower. Removable crank insures safety. Heavy gauge steel base plate, hinged to facilitate mounting on slanting or straight surface. As new antennas are developed TRI-EX Towers may be easily lowered to install new and improved arrays.

MODELS WITH 20 FT. SECTIONS

Model	Weight	Height Ext.	Height Nested
T-237	123 lbs.	37'	20'-3"
T-354	185 lbs.	54'	20'-3"
T-471	225 lbs.	71'	20'-8"
T-588	325 lbs.	88'	21'-0"

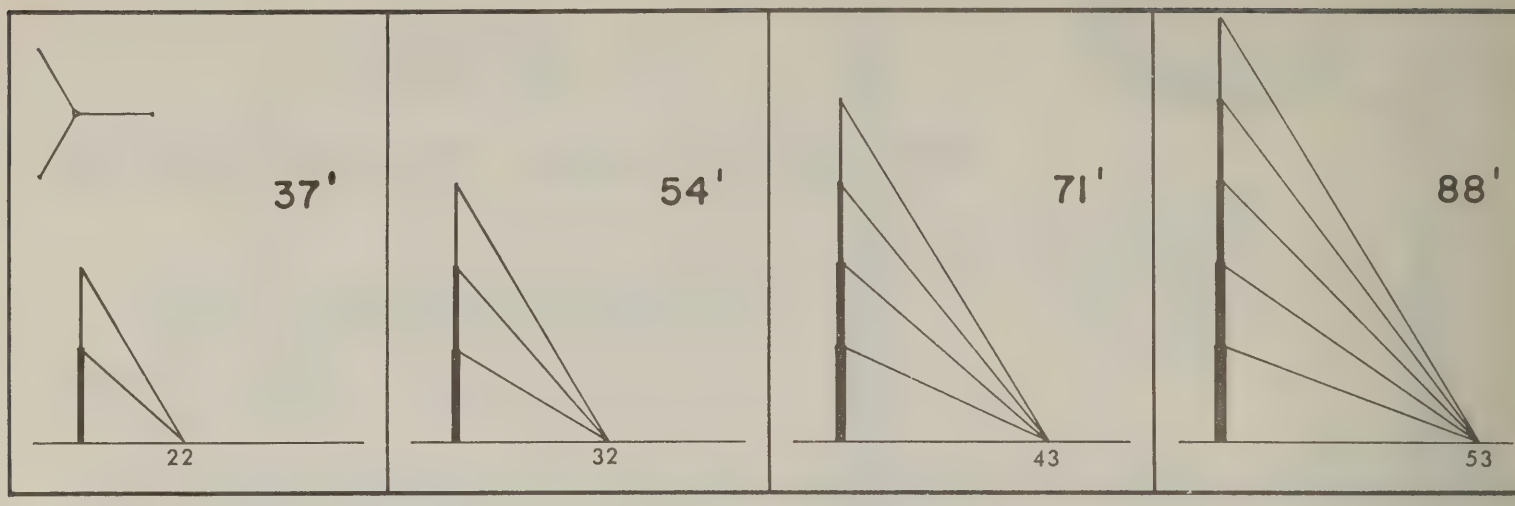
MODELS WITH 10 FT. SECTIONS

Model	Weight	Height Ext.	Height Nested
T-218	84 lbs.	18'	10'-3"
T-327	110 lbs.	27'	10'-6"
T-436	144 lbs.	36'	10'-9"
T-545	188 lbs.	45'	11'-0"
T-652	245 lbs.	52'	11'-4"
T-761	330 lbs.	61'	11'-9"

ALL TOWERS GALVANIZED

NOTE: Standard equipment with Towers include Base Plate and Pin, Safety Stops, and Crank.

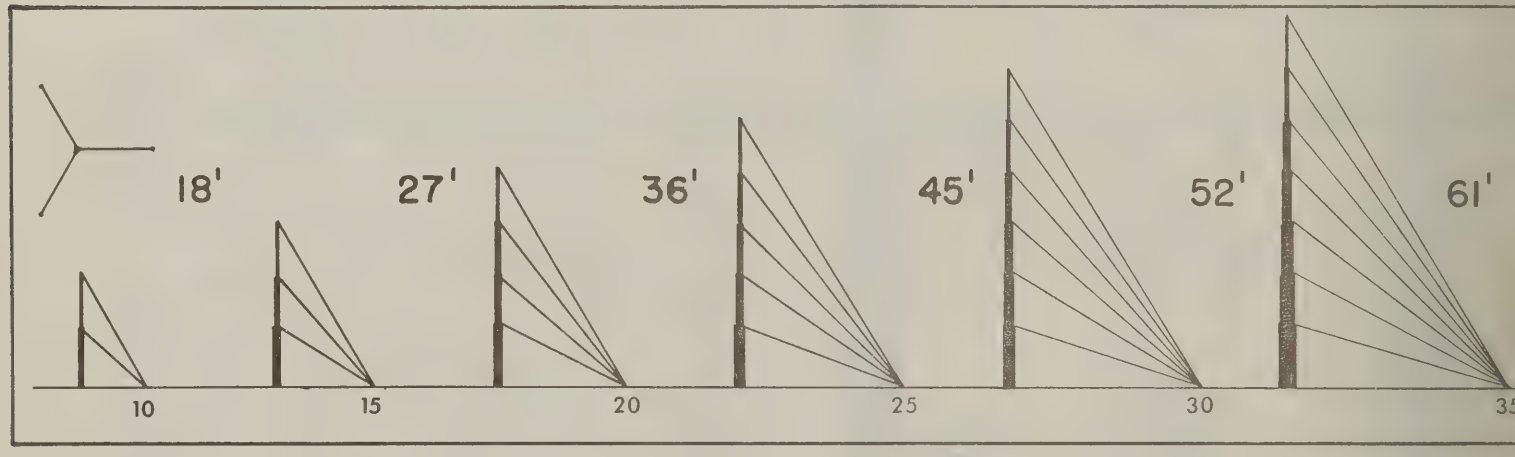
TYPICAL INSTALLATIONS



TOWER KITS (20 FT. SECTIONS)

KITS CONTAIN ALL HARDWARE NEEDED FOR COMPLETE INSTALLATION

KIT MODEL	TOWER HEIGHT	NUMBER OF GUYS	GUY WIRE	CLAMPS MA-18	THIMBLES TH-316	TURNBUCKLES H-16
T-237K	37 ft.	6	250 ft.	24	6	6
T-354K	54 ft.	9	480 ft.	36	9	9
T-471K	71 ft.	12	800 ft.	48	12	12
T-588K	88 ft.	15	1210 ft.	60	15	15



TOWER KITS (10 FT. SECTIONS)

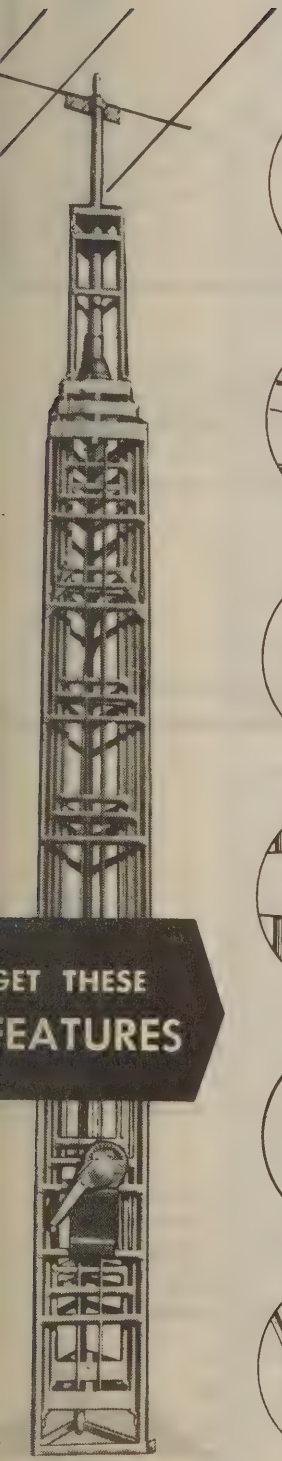
KITS CONTAIN ALL HARDWARE NEEDED FOR COMPLETE INSTALLATION

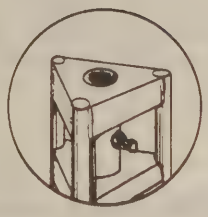
KIT MODEL	TOWER HEIGHT	NUMBER OF GUYS	GUY WIRE	CLAMPS MA-180	THIMBLES TH-316	TURNBUCKLES H-16
T-218K	18 ft.	6	120 ft.	24	6	6
T-327K	27 ft.	9	230 ft.	36	9	9
T-436K	36 ft.	12	400 ft.	48	12	12
T-545K	45 ft.	15	600 ft.	60	15	15
T-652K	52 ft.	18	850 ft.	72	18	18
T-761K	61 ft.	21	1150 ft.	84	21	21

NOTE: IN ADDITION TO THE ITEMS LISTED ABOVE, ALL KITS CONTAIN THE FOLLOWING; (1) AD-50 MAST, 2" O.D. x 5 FEET, (3) GUY PLATES, (3) ANCHOR RODS. ALL CABLE 1/8"

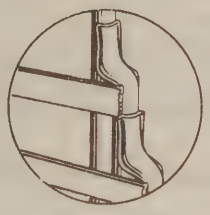
THD-SERIES

Crank-up GUYED TOWERS



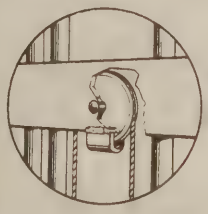


TOP SECTION
To fit standard size 2" O.D. mast.

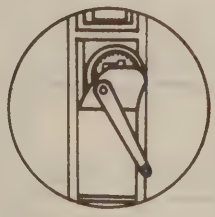


DIE FORMED GUIDES
End of tubing formed to insure minimum friction; designed to prevent binding in raising and lowering of tower. No moving parts.

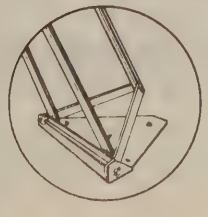
SAFETY STOPS
Constructed of heavy 3/16" steel relieves tension on cable when leaving tower extended for a long period of time.



DURABLE PULLEY CONSTRUCTION
Sealed ball bearing aircraft pulleys used throughout. All crank up towers use rustproof, high strength aircraft cable.



PERMANENT WINCH
Built-in ratchet for ease and safety in cranking up tower.
Removable crank



HINGED BASE PLATE
Constructed of heavy gauge steel, hinged to facilitate mounting on slanting or straight surface.

NOW COMPLETELY REDESIGNED FOR GREATER STRENGTH AND VERSATILITY

Tri-Ex now offers to the Ham a Low Cost Tower capable of handling todays Tri Band Antennas.

Eight Models to choose from ; 4 with 20 foot sections, 4 with 10 foot sections. All models are HOT DIPPED GALVANIZED after fabrication.

All Models support 7 sq. feet of antenna area at full height in 70 MPH winds.

CDR Rotators mount directly inside Top Section. Top sleeve acts as bearing and protects rotator from radial thrust. Note: Top Section will not nest completely with CDR rotator mounted (see photo at left).

Also available on all Models (EXTRA), is TRI-EX'S exclusive "Safety Guy Erection Fixture" (G.A.Y.E.)

MODELS WITH 20 FT. SECTIONS

Model	Weight	Height Ext.	Height Nested
THD-237	152 lbs.	37'	20'-3"
THD-354	237 lbs.	54'	20'-6"
THD-471	308 lbs.	71'	20'-10"
THD-588	410 lbs.	88'	21'-4"

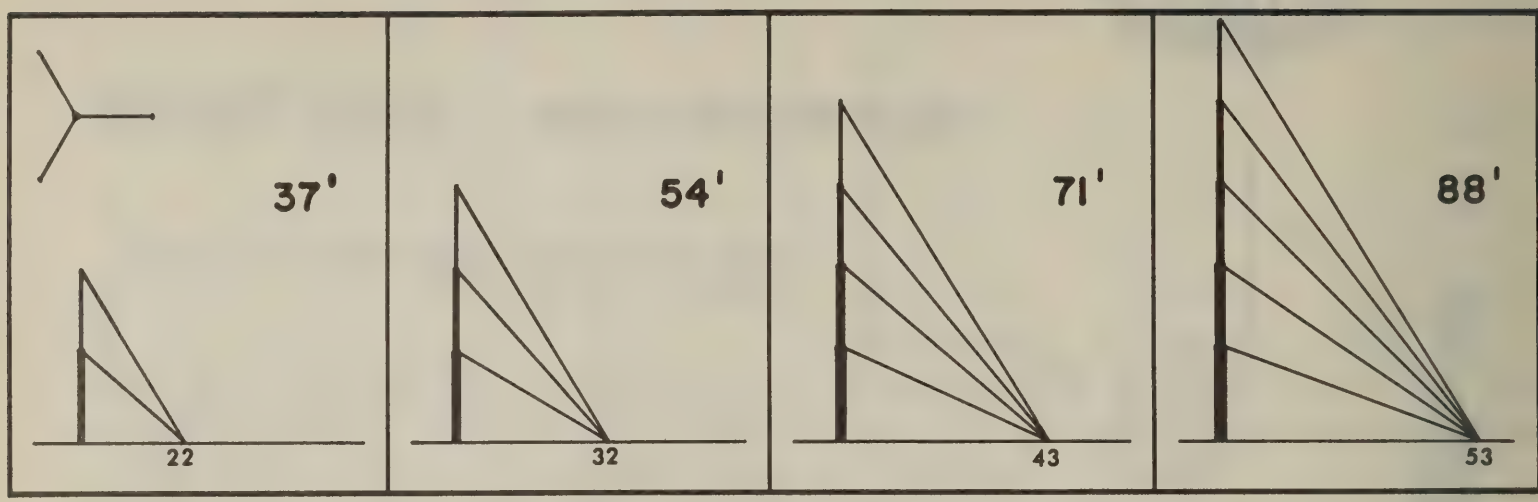
MODELS WITH 10 FT. SECTIONS

Model	Weight	Height Ext.	Height Nested
THD-218	93 lbs.	18'	10'-3"
THD-326	130 lbs.	26'	10'-6"
THD-434	193 lbs.	34'	10'-10"
THD-542	268 lbs.	42'	11'-4"

NOTE: Models up to 122 Feet in height are available upon special request.

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

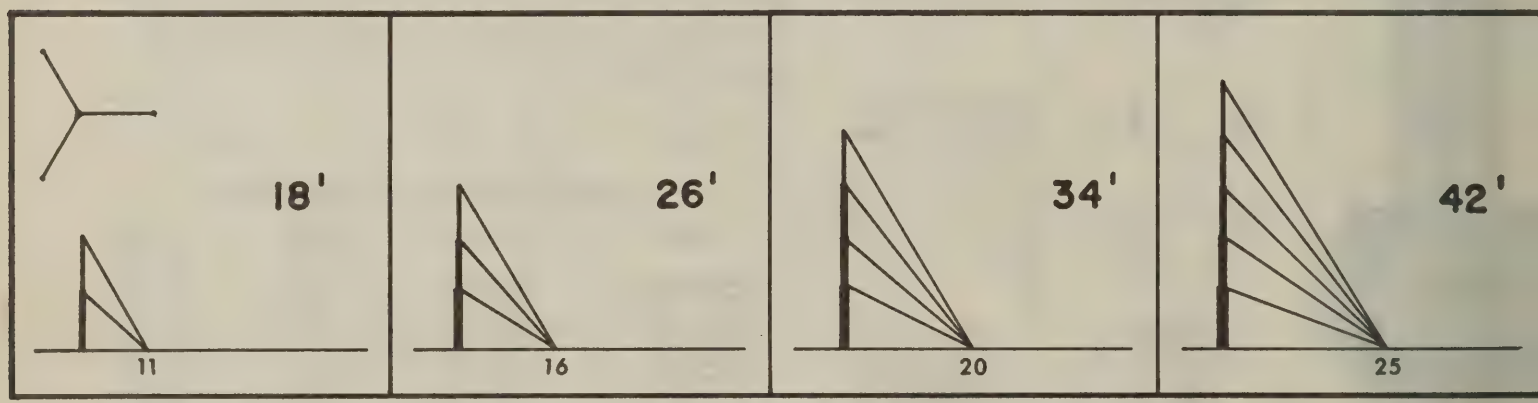
TYPICAL INSTALLATIONS



TOWER KITS (20 FT. SECTIONS)

KITS CONTAIN ALL HARDWARE NEEDED FOR COMPLETE INSTALLATION

KIT MODEL	TOWER HEIGHT	NUMBER OF GUYS	GUY WIRE	CLAMPS MA-18	THIMBLES TH-316	TURNBUCKLES H-16
THD-237K	37 ft.	6	250 ft.	24	6	6
THD-354K	54 ft.	9	480 ft.	36	9	9
THD-471K	71 ft.	12	800 ft.	48	12	12
THD-588K	88 ft.	15	1210 ft.	60	15	15

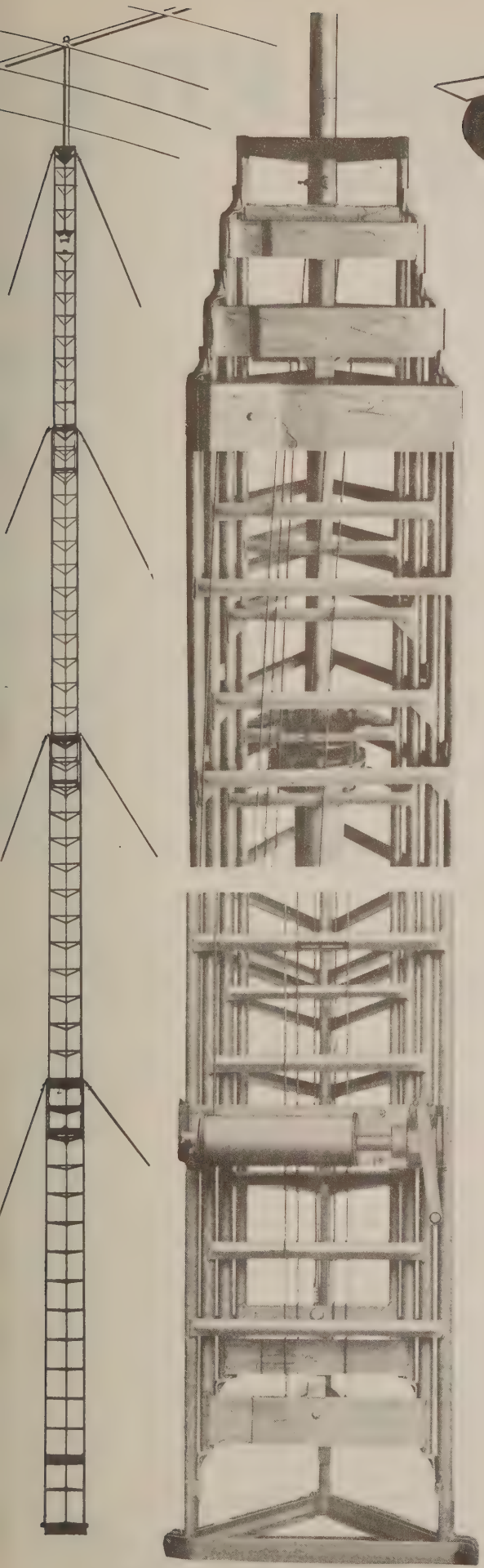


TOWER KITS (10 FT. SECTIONS)

KITS CONTAIN ALL HARDWARE NEEDED FOR COMPLETE INSTALLATION

KIT MODEL	TOWER HEIGHT	NUMBER OF GUYS	GUY WIRE	CLAMPS MA-18	THIMBLES TH-316	TURNBUCKLES H-16
THD-218K	18 ft.	6	130 ft.	24	6	6
THD-326K	26 ft.	9	250 ft.	36	9	9
THD-434K	34 ft.	12	400 ft.	48	12	12
THD-542K	42 ft.	15	600 ft.	60	15	15

NOTE: IN ADDITION TO THE ITEMS LISTED ABOVE, ALL KITS CONTAIN THE FOLLOWING; (1) 10 FT. MAST, 2" O.D. x .120" WALL; (3) GUY PLATES ; (3) GUY ANCHOR RODS. ALL GUY CABLE LISTED IS 1/8" 1x19 GALV. A/C, 2100 LBS. MIN. BREAKING STRENGTH.



Tri-Ex EXTRA LARGE

HAM and INDUSTRIAL TOWERS

CRANK-UP HS SERIES

GUYED MODELS

Top section has large 13 7/8" cross section which is large enough to accommodate CDR and other Rotator Motors inside top section.

Choice of removable top mast plate or pre-drilled CDR mounting plate.

Raising winch includes ratchet for easy cranking up during installation on 37', 54', and 71' models. Worm gear winch used on 88', and 105' models.

All raising cables of 7x19 construction, galvanized aircraft grade. Minimum size used is 1/4" 7000 pound test.

Each tower shipped complete with crank, base, and safety stops. The safety stops eliminate all weight on raising cable when guying is complete.

Also available on all Models (EXTRA), is TRI-EX'S exclusive "Safety Guy Erection Fixture" (G.A.Y.E.)

Engineering details and calculations are available upon request.

ALL TOWERS GALVANIZED

Model	Weight	Height Ext.	Height Nested
HS-237	264 lbs.	37'	20'-5"
HS-354	390 lbs.	54'	20'-10"
(Above models come with 9 to 1 winch)			
HS-471	575 lbs.	71'	21'-5"
(Above model comes with 12 to 1 winch)			
HS-588	760 lbs.	88'	22'-0"
HS-6105	1070 lbs.	105'	22'-6"
(Above models come with 40 to 1 winch)			

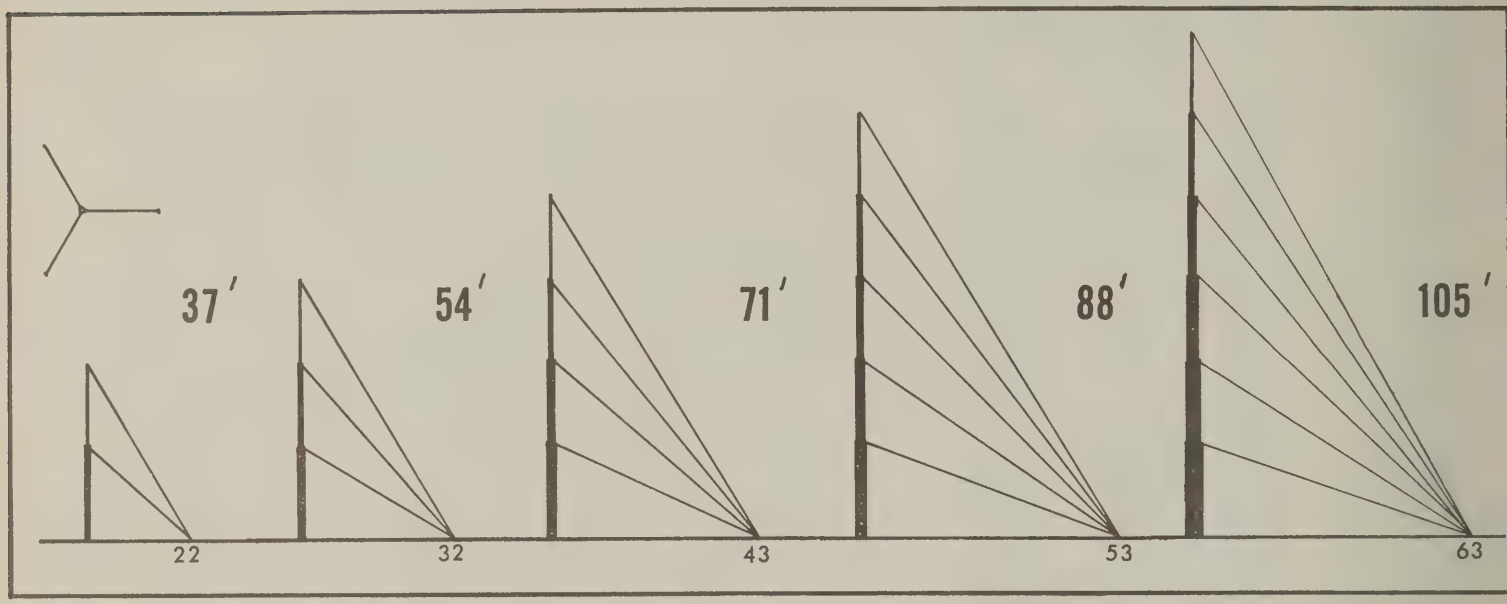
NOTE: Models up to 147 Feet in height are available upon special request.

Tri-Ex® TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

Tri-Ex HS SERIES TOWER KITS

CONTAINS EVERYTHING NEEDED FOR COMPLETE

TOWER INSTALLATION

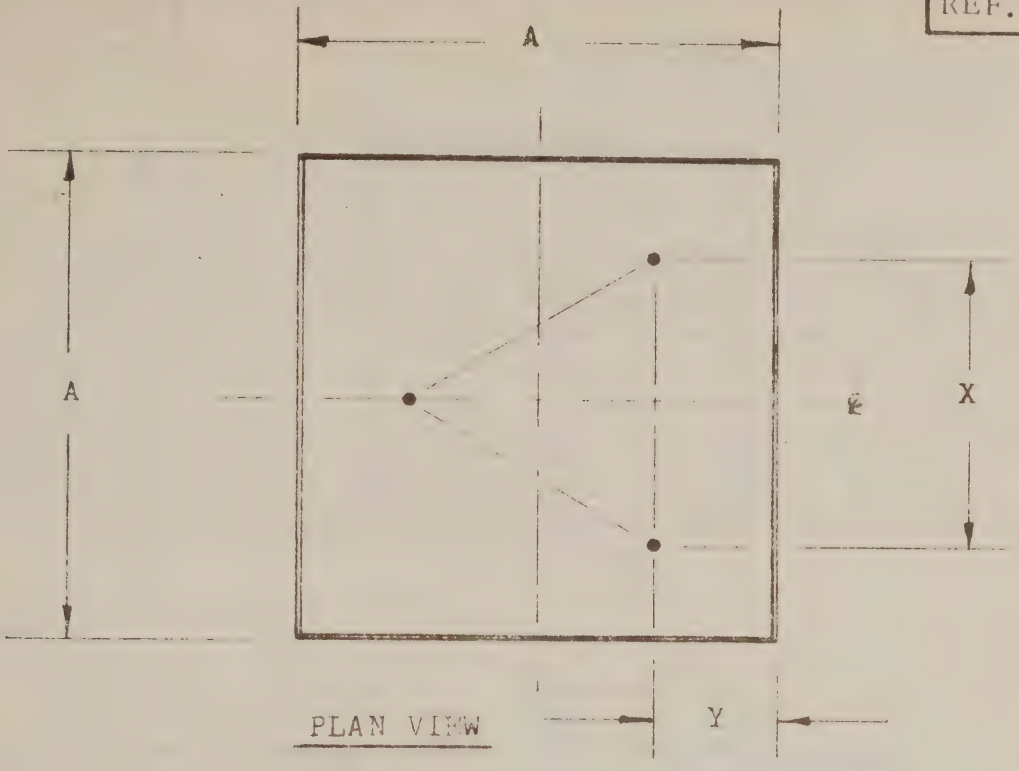


KIT MODEL	TOWER HEIGHT	GUY WIRE			CLAMPS		THIMBLES	TURNBUCKLES	
		1/8"	5/32"	3/16"	MA-180	MA-316	TH-316	H-16	DFT-386
HS-237K	37 ft.	330 ft.			24		6	6	
HS-354K	54 ft.	570 ft.			36		9	9	
HS-471K	71 ft.		800 ft.			48	12		12
HS-588K	88 ft.			1210 ft.		60	15		15
HS-6105K	105 ft.			1700 ft.		72	18		18

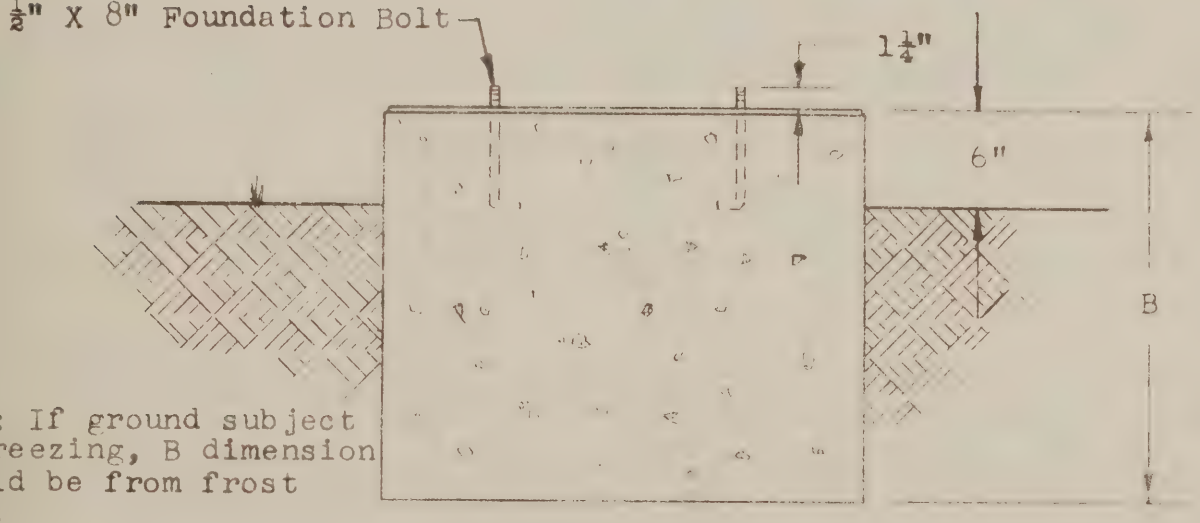
IN ADDITION TO THE ITEMS LISTED ABOVE, ALL KITS CONTAIN: (1) AD-100 MAST, 2" O.D. x 10 FT., (3) H-15 GUY PLATES, (3) CA-21 CONCRETE GUY ANCHORS.

FOR GUY POINT DISTANCES DIFFERENT THAN SPECIFIED ON KITS, REFER TO INSTALLATION SHEET GUY CHART FOR METHOD OF FIGURING GUY WIRE LENGTHS.

REF. NO. HS-F



PLAN VIEW



Note: If ground subject to freezing, B dimension should be from frost line.

ELEVATION

Model HS	A	B	X	Y	Concrete
237	24"	24"	11-1/2"	7"	.30 Cu. Yd.
354	24"	24"	14-3/8"	5-3/4"	.30 Cu. Yd.
471	30"	24"	17-1/8"	7-1/2"	.46 Cu. Yd.
588	36"	24"	19-7/8"	10"	.66 Cu. Yd.
6105	42"	30"	22-3/4"	11"	1.13 Cu. Yd.

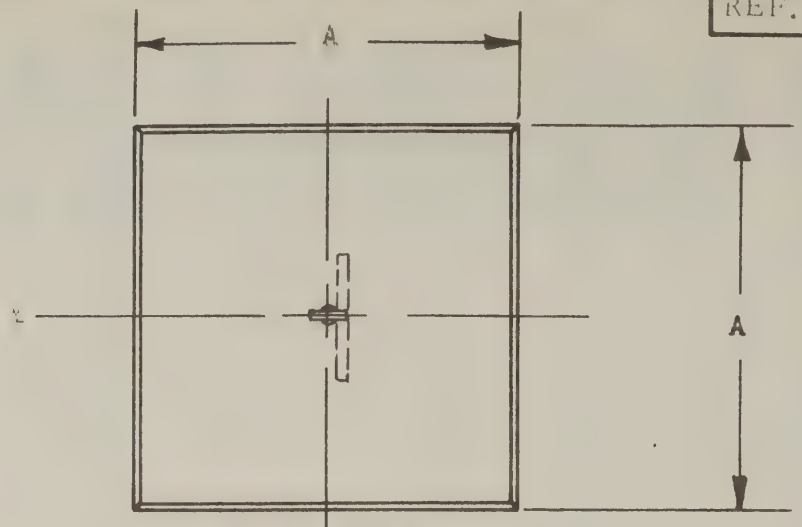
Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

TITLE: HS SERIES BASE FOOTINGS

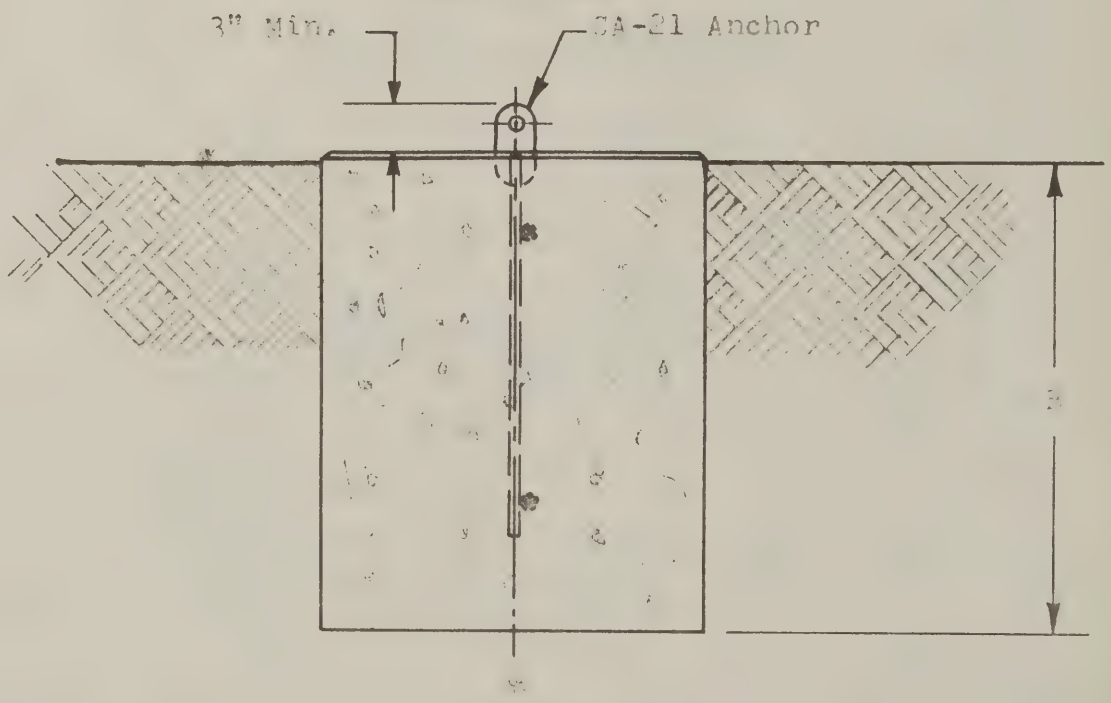
ISSUE: A-66

SHEET NO. 01

REF. NO. HS-



PLAN VIEW



ELEVATION

HS	A	B	Concrete
23[illegible]	[illegible]"	[illegible]"	.37 Cu.Yd.
35[illegible]	30"	36"	.70 Cu.Yd.
471	30"	36"	.70 Cu.Yd.
588	36"	42"	1.11 Cu.Yd.
6105	36"	54"	1.50 Cu.Yd.

NOTE: If ground subject to freezing, B dimension should be from frost line.

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF

TITLE:
HS SERIES GUY DEADMAN

ISSUE: A/[illegible]

SHEET NO. [illegible]

GUY AS YOU ERECT

What is G.A.Y.E. ?

It is a unique feature develeoped by TRI-EX Tower Corporation for raising and lowering guyed towers. In addition, it provides you with built-in safety stops. No ladder is required to insert safety stops, as all locking is controled from ground level.

What does this mean to you ?

It allows you to raise and lower your guyed tower with complete safety. If a gust of wind should come up while you are installing the tower or lowering the antenna, only one section of the tower will be unguyed. This gives you the safety of a self-supporting tower.

How does it work ?

With G.A.Y.E., the tower is raised to the vertical position and the lower or base section is guyed. You then commence raising the tower. The remaining sections are locked together so that they will raise in the nested position. When the second section is fully extended, the locking arm on the base section will engage with the section stops on the extended section. (fig. 1). At this point, the cable attached to the locking arm on the second section is pulled to release the third section. After raising the third section approximately 2 to 5 inches, the guys from the second section are secured to their anchor points. Now continue raising the third section with the remaining nested sections. Each section is guyed off separately as it is fully extended, thus eliminating raising the tower to full height before securing the guys. In lowering the tower, the operation is reversed. You lower the top section into the second, the top and second sections stay nested while you lower the third, etc. This way you only unguy the section that you will work with.

How to determine tower requirements.

For an example, if you were to purchase a four section tower (471), you would require three units. A five section tower (588), would require four units. The number of units required per tower is always one less than the number of sections used. This corresponds with the number of section laps which is always one less than the total number of sections.

G.A.Y.E. is sold only as a factory installed accessory.

BE SAFE

USE G. A. Y. E.

ON YOUR TRI-EX TOWER

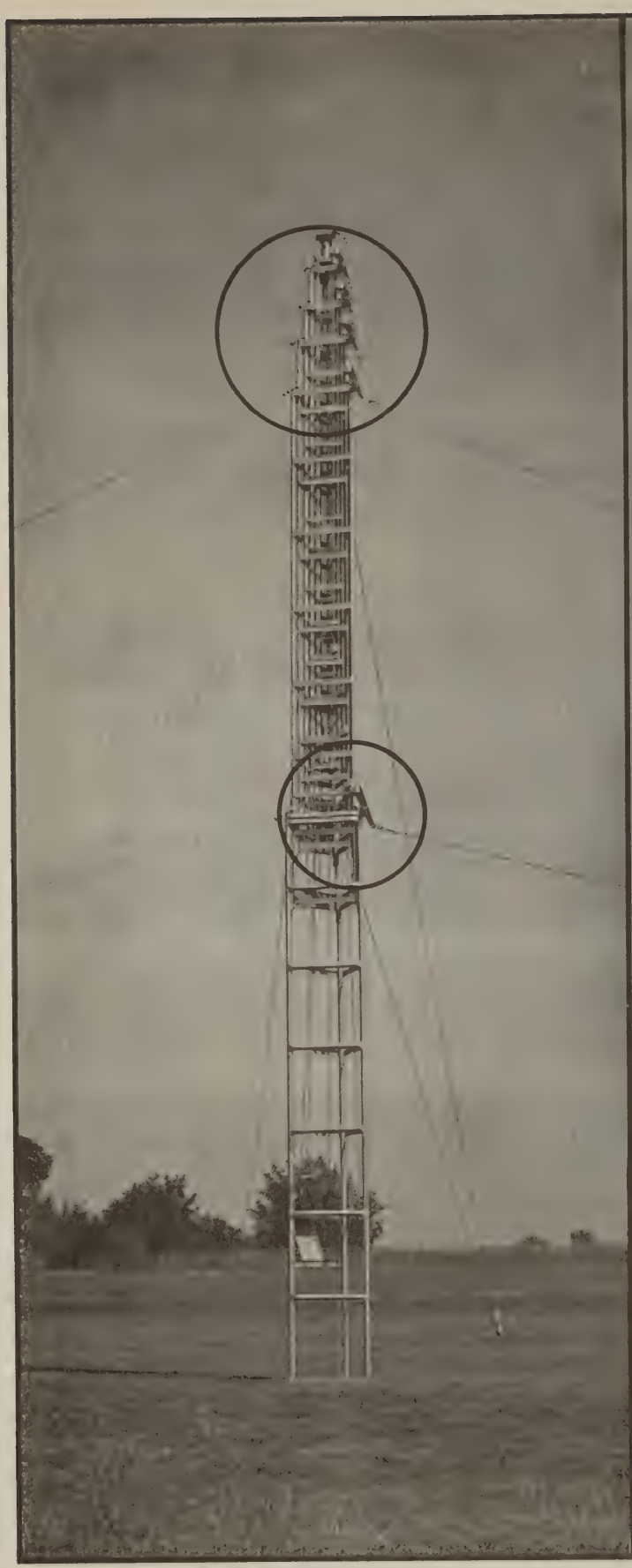


Fig. 1

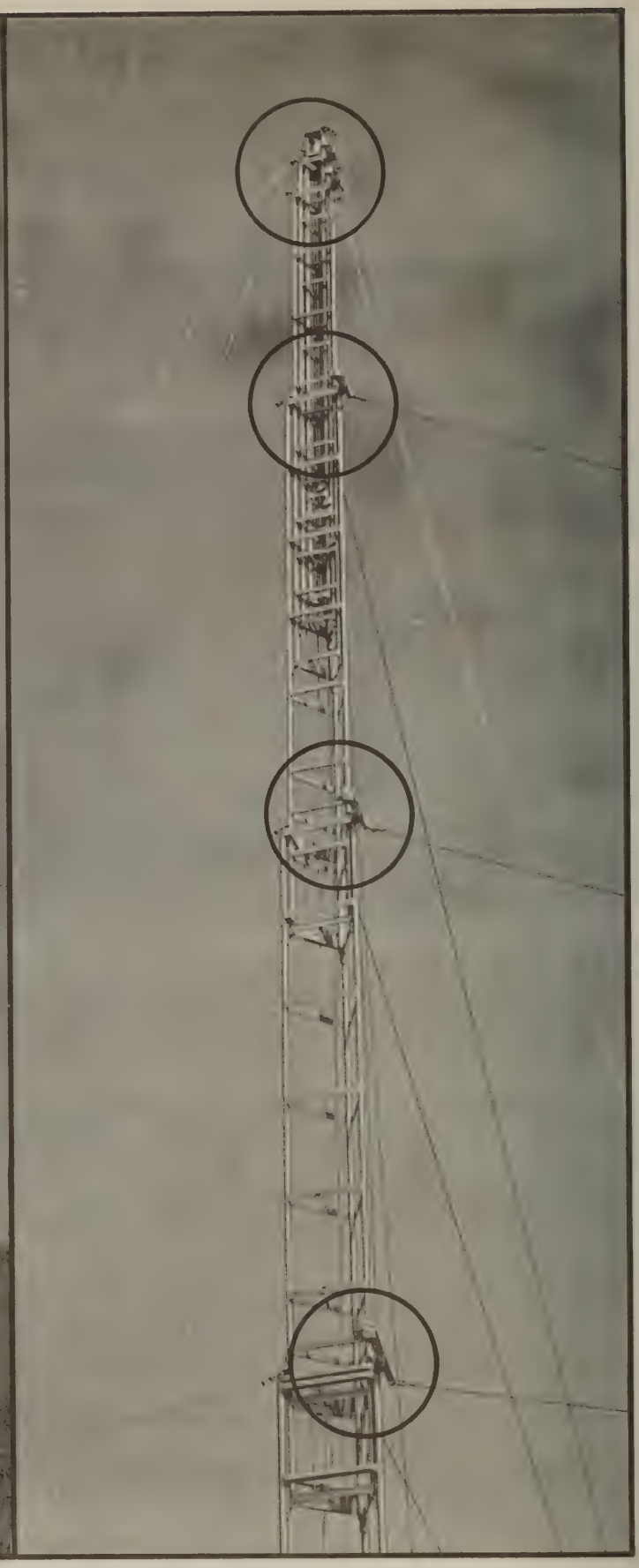


Fig. 2

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

GUYING ACCESSORIES

DROP FORGED CABLE CLAMPS

MODEL	SIZE	WT. PER 100 PCS.
DFC-18	1/8"	6 lbs.
DFC-316	3/16"	10 lbs.
DFC-14	1/4"	18. lbs.
DFC-516	5/16"	32 lbs.
DFC-38	3/8"	48 lbs.
DFC-12	1/2"	76 lbs.
DFC-58	5/8"	105 lbs.
DFC-34	3/4"	160 lbs.
DFC-10	1"	270 lbs.

MALLEABLE CABLE CLAMPS

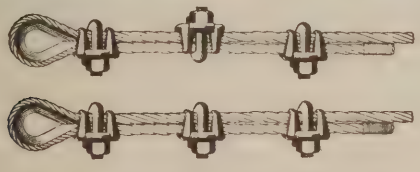
MODEL NO.	DESCRIPTION
MA-180	1/8" Malleable Cable Clamp
MA-316	3/16" Malleable Cable Clamp
MA-140	1/4" Malleable Cable Clamp

Proper Method of Applying Wire Rope Clips

The RIGHT WAY to Clip Wire Rope

Note that the base of the clip bears against the live end of the wire rope, while the "U" of the bolt presses against the dead end.

The WRONG WAY to Clip Wire Rope



The "U" of the clips *should not* bear against the live end of the wire rope, because of the possibility of the rope being cut or kinked.

Five of the six clips shown on the two illustrations above are incorrectly installed. Do not use either of the methods shown.

Number and Spacing of Drop-Forged Steel Clips for Safe Application

Rope diam, in.	1/4	3/8	1/2	5/8	3/4	7/8	1
Min. No. of Clips	2	2	3	3	4	4	5
Spacing of Clips, in.	2	2 1/2	3	3 3/4	4 1/2	5 1/4	6

Galvanized Guy Cable Thimbles

MODEL NO.	DESCRIPTION
TH-316	3/16" Galvanized Guy Wire Thimble
TH-140	1/4" Galvanized Guy Wire Thimble
TH-516	5/16" Galvanized Guy Wire Thimble
TH-380	3/8" Galvanized Guy Wire Thimble

1x19 Galvanized Aircraft Cable for guying

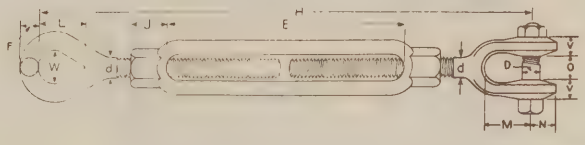
Size	Wt. Per 100 Ft.	Strength
1/8"	3.50 lb.	2100 lb.
5/32"	5.50 lb.	3300 lb.
3/16"	7.70 lb.	4700 lb.
1/4"	13.50 lb.	8200 lb.

DROP FORGED TURNBUCKLES

MODEL NO.	SIZE	WT. EA.	BREAKING STRENGTH LBS.
DFT-386	3/8"x6"	1.01 lbs.	5,200 lbs.
DFT-126	1/2"x6"	1.74 lbs.	9,800 lbs.
DFT-586	5/8"x6"	2.95 lbs.	15,800 lbs.
DFT-349	3/4"x9"	5.41 lbs.	23,400 lbs.
DFT-7812	7/8"x12"	9.4 lbs.	32,400 lbs.
DFT-1120	1"x12"	12.1 lbs.	42,400 lbs.

Turnbuckles with Eye and Jaw End Fittings

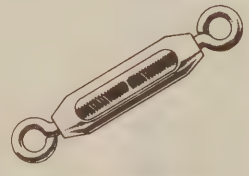
Drop-Forged Steel—Weldless



Size Diam d in.	*Take-up E in.	D in.	H in.	J in.	M in.	N in.	O in.	V in.	Y in.	F in.	L in.	W in.	Weight approx lb	Breaking Strength tons
3/8	6	5/16	11 1/8	1 9/32	1 1/32	7/16	1/2	5/16	1 3/16	1 1/32	1 1/8	1 7/32	1.01	2.6
1/2	6	3/8	12 3/8	3/4	1 1/4	9/16	5/8	1 3/32	1	7/16	1 7/16	2 3/32	1.74	4.9
5/8	6	1/2	14 1/2	1 1/16	1 9/16	2 1/32	3/4	1/2	1 5/16	1/2	1 3/4	7/8	2.95	7.9
3/4	9	5/8	18 9/16	1 5/32	1 13/16	2 9/32	1 5/16	9/16	1 5/8	5/8	2 1/8	1	5.41	11.7
7/8	12	3/4	22 7/8	1 5/16	2 1/8	1 3/32	1 1/8	1 1/16	1 7/8	3/4	2 3/8	1 1/4	9.4	16.2
1	12	7/8	24 7/8	1 1/2	2 1/2	1 7/32	1 3/16	2 5/32	2 1/8	7/8	3	1 7/16	12.1	21.2

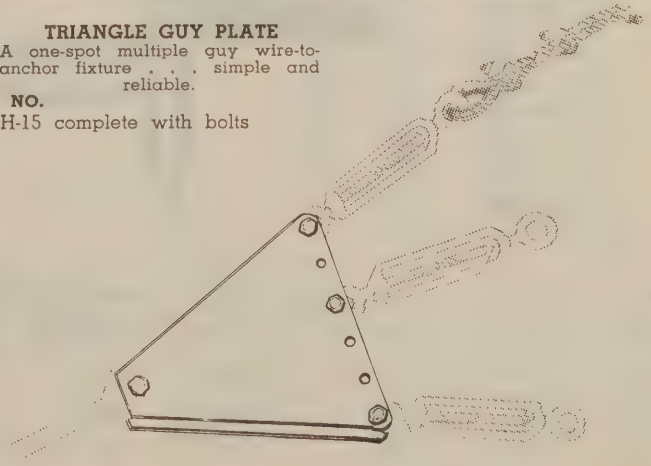
MALLEABLE TURN BUCKLES
3/8" x 6"
(For Guying 1000 lb. maximum Loading)

NO.	CLOSED	OPEN
H-16	7 1/2"	10 1/2"



TRIANGLE GUY PLATE
A one-spot multiple guy wire-to-anchor fixture . . . simple and reliable.

NO.
H-15 complete with bolts



Tri-Ex

SCREW ANCHORS

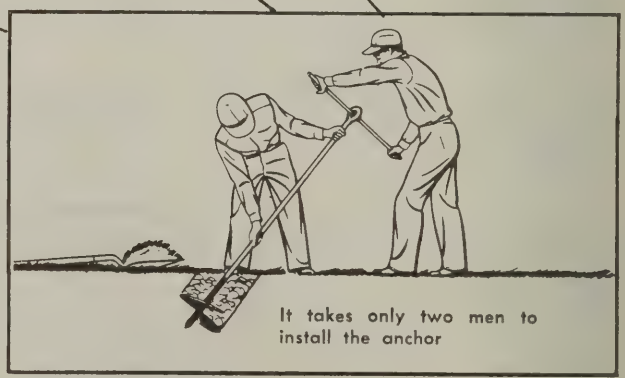
Holds Towers down tight — increases safety for installing towers and antennas . . .
Cut labor costs with quick installations

The Tri-Ex Screw Anchor eliminates the time-consuming chore of digging holes. With a bar that's at hand or length of scrap pipe placed through the eye of the rod, the anchor is screwed speedily and solidly into the ground by just two men.

Sure strength in all steel construction
The anchor rod, of drop forged, galvanized steel, is double arc welded to a high strength structural steel blade or helix. The screw plate and a part of the rod is dipped in rust-resistant black asphalt paint.

Engineered to grip powerfully
Blade edges — sharpened to "bite-in" — spiral into the earth with very little disturbance, placing most of the stress of the guy in solid earth. Upper edges of the blade are also sharpened for easy retrieving. The anchor hub is designed for maximum strength at minimum size for least possible friction during installation.

Use in sandy soil, clay or loam
Standard safety factors should be applied in calculating the required holding strength of the anchor. A safety factor of 2 to 1, or more, is recommended for use with the table below.



It takes only two men to install the anchor

Anchor Number	Plate Size	Plate Area Sq. In.	Rod Size	Overall Length	Weight Each
EA-4	6"	28"	3/4"	48"	8
EA-6	6"	28"	3/4"	66"	11
EA-8	8"	50"	1"	66"	18

Soil-Anchor Holding Capacity

	Class No. 4	Class No. 5	Class No. 6	Class No. 7
EA-4	3,500	2,500	2,000	1,000
EA-6	8,500	6,500	5,000	2,500
EA-8	11,000	8,000	6,500	3,500

Larger sizes and longer lengths available on special order.

Soil Classifications: No. 4. Hard, well drained, Clay predominating. No. 5. Firm, moist High clay content, well drained. No. 6. Plastic, wet, poorly drained area fairly good clay content. No. 7. Loose, dry, high in sand or gravel content or loose, wet loam or gravel.

TRI-EX

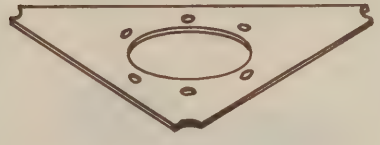
ALWAYS SPECIFY TOWER MODEL WHEN ORDERING TRI-EX ACCESSORIES

ROTATOR MOUNTING PLATES

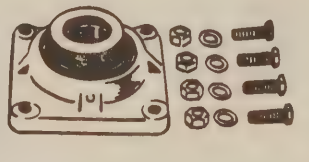
Predrilled mounting plates are available for all CDR rotators and for small PROP PITCH motors.

C D R

PROP-PITCH



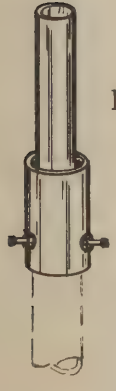
FLANGE THRUST BEARING FOR ANTENNA MAST MODEL TB-2



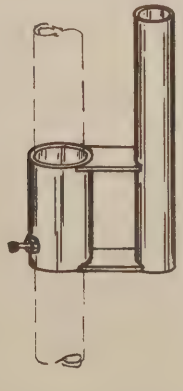
Takes weight of antenna and mast off rotating motor. Self-aligning, sealed ball-bearing type. (For all models except T-Series) Shipped complete with bolts.

TRI-EX MAST ADAPTORS

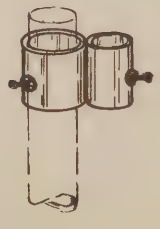
MODEL	SIZE
H-11	.... 2" O.D. (please specify I.D.)
H-12	.... 2" I.D. to 1 5/8" O.D. (top mount)
H-13	.... 2" I.D. to 1 5/8" O.D. (side mount)
H-14	.... 2" I.D. to 1 1/4" I.D.



H-12



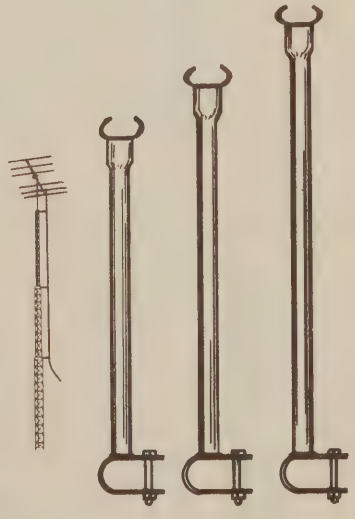
H-13



H-14

COAX STANDOFF KITS

(For fastening coax to all TRI-EX Towers)



CO-2 ... for 2 section Tower
CO-3 ... for 3 section Tower
CO-4 ... for 4 section Tower
CO-5 ... for 5 section Tower

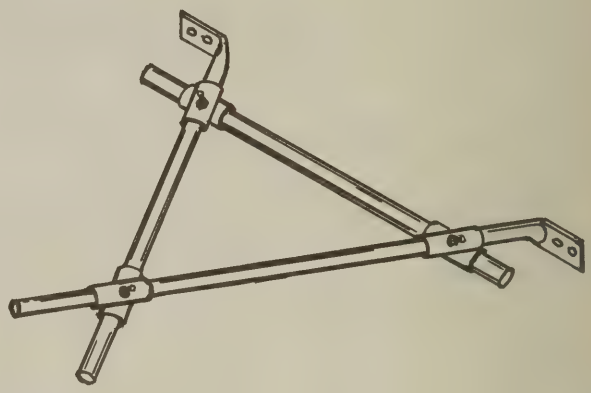
Tri-Ex ACCESSORIES

ADJUSTABLE WALL BRACKET

MODELS: H-1 & H-2

H-1 ... Fits any tower up to 18 inches cross-section

H-2 ... Fits any tower up to 26 inches cross-section.



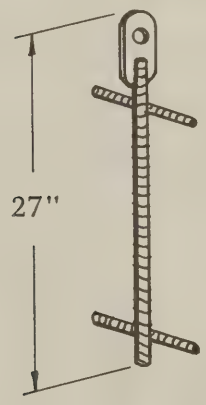
TRI-EX EXTENSION MASTS

(2"O.D. x .120" wall)

MODEL	LENGTH	WEIGHT
AD-50	5 ft.	12 lbs.
AD-100	10 ft.	25 lbs.
AD-150	15 ft.	37 lbs.
AD-200	20 ft.	50 lbs.

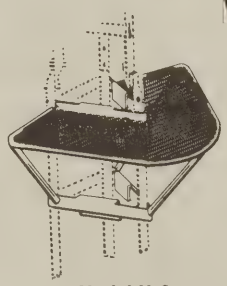
CA-21 GUY ANCHOR

(for concrete deadman)

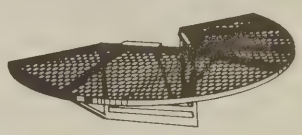


WORK PLATFORMS

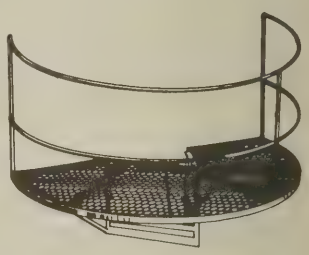
For Tri-Ex Towers



Model H-8

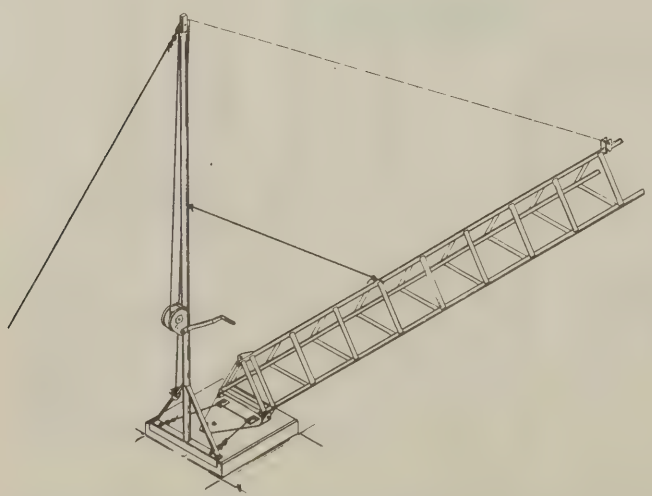


Model H-8HD



Model H-8HDR

	Weight
H-8 Work Platform	20 lbs.
H-8HD Extra Large Work Platform	50 lbs.
H-8HDR Extra Large Work Platform with safety railing	67 lbs.



GIN POLE

For Tower Installation

GP-250-10 Towers 600 to 1200 lbs. 20 ft. sections

GP-200-10 Towers under 600 lbs. 20 ft. sections

GP-150-7 For Tri-Ex 10 ft. size "T" series

Tower tilts at base hinge. Ideal for installation of heavy towers and antenna adjustment work from ground level. Winch features automatic brake.

CRANK-UP SELF-SUPPORTING TOWERS

Tri-Ex® TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

Small Super Mast in a big way.

For the low profile Ham operator.

MODEL	NESTED HEIGHT	EXTENDED HEIGHT	WEIGHT
SM-40	21 FEET	37 FEET	200 LB.

FEATURES

FULLY GALVANIZED FOR LONG LIFE

2" O.D. ROTATOR MOUNTING STUB

SELF-SUPPORTING WITH BOTTOM SECTION SECURED TO BUILDING OR GUYED

SUPPORT BASE AND RAISING FIXTURE AVAILABLE AS ACCESSORIES

AERODYNAMIC DESIGN PRESENTS A PLEASING PORFILE

DESIGN

HIGH STRENGTH TUBULAR SECTIONS... TOP 3 1/2"O.D. BOTTOM 4 1/2"O.D.

WIND LOAD.. 6 SQ.FT. AT 50 MPH WINDS WITH WALL MOUNT OR GUYED ASSEMBLY

4 SQ.FT. AT 50 MPH WINDS WITH SUPPORT BASE ASSEMBLY

MAXIMUM TOP WEIGHT... 75 POUNDS... (ANTENNA AND ROTATOR)

Tri-Ex® TOWER CORPORATION

7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

All prices subject to change without notice.

commu-nicate with a

mW Series TOWER

FEATURES...

- Featuring twist resistant "W" bracing.
- Fully galvanized finish for long life.
- Mounting stub provided for rotator.
- Upper sections self-supporting with bottom section secured to building or with guy cables.
- Hinge base and wall bracket shipped with each tower.
- Models with 10 foot and 20 foot sections.

Model	Nested Height	Extended Height	Weight	Wind Load
MW-18	10½ FT.	18 FT.	87 LB.	12.0 SQ. FT.
MW-25	11 FT.	25 FT.	140 LB.	10.6 SQ. FT.
MW-33	11½ FT.	33 FT.	198 LB.	8.5 SQ. FT.
MW-35	20½ FT.	35 FT.	145 LB.	9.5 SQ. FT.
MW-50	21 FT.	50 FT.	234 LB.	8.6 SQ. FT.
MW-65	21½ FT.	65 FT.	330 LB.	5.0 SQ. FT.

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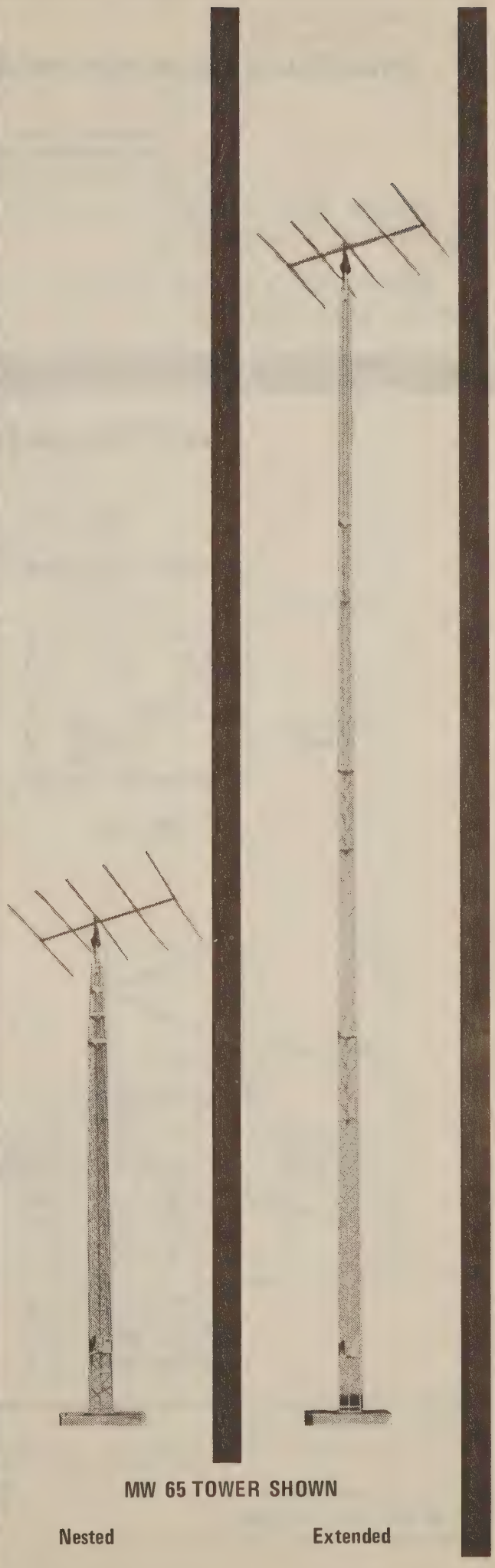
PHONE: (209) 732-8383

7-72



MW 65 TOWER SHOWN

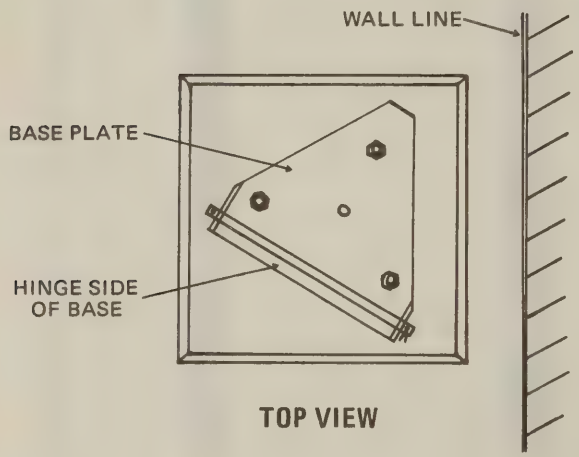
Nested Extended

WIND LOAD DATA FOR MW SERIES TOWERS

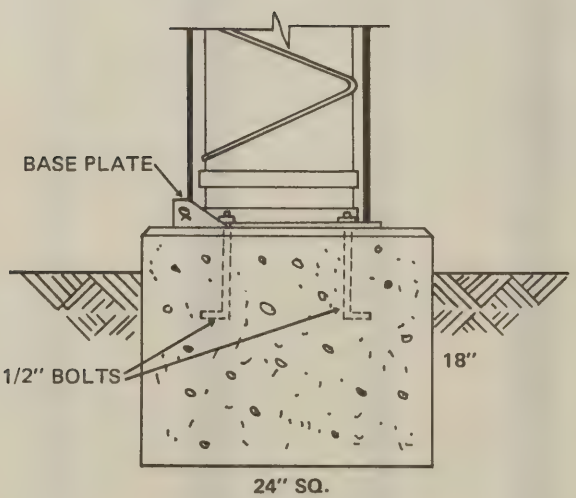
Allowable Antenna Wind Load Area Mounted At Two (2) Feet Above Top of Tower In 50 MPH Winds

MODEL	ANTENNA AREA
MW-18	12.0 SQ. FT.
MW-25	10.6 SQ. FT.
MW-33	8.5 SQ. FT.
MW-35	9.5 SQ. FT.
MW-50	8.6 SQ. FT.
MW-65	5.0 SQ. FT.

INSTALLATION



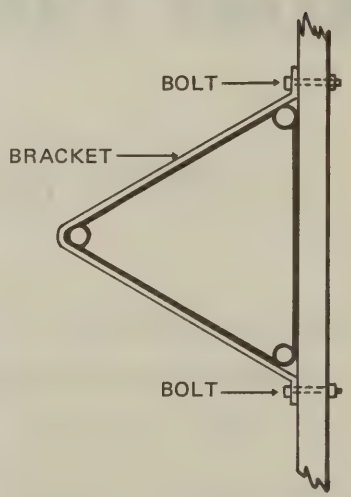
TOP VIEW



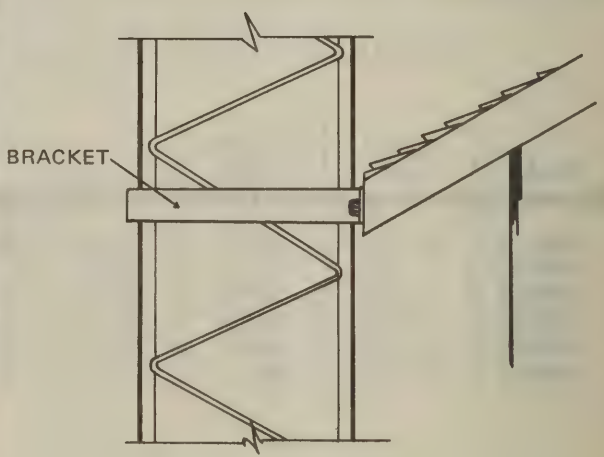
ELEVATION

TOWER BASE DETAIL

DETAILS



TOP VIEW



ELEVATION

MOUNTING BRACKET DETAIL

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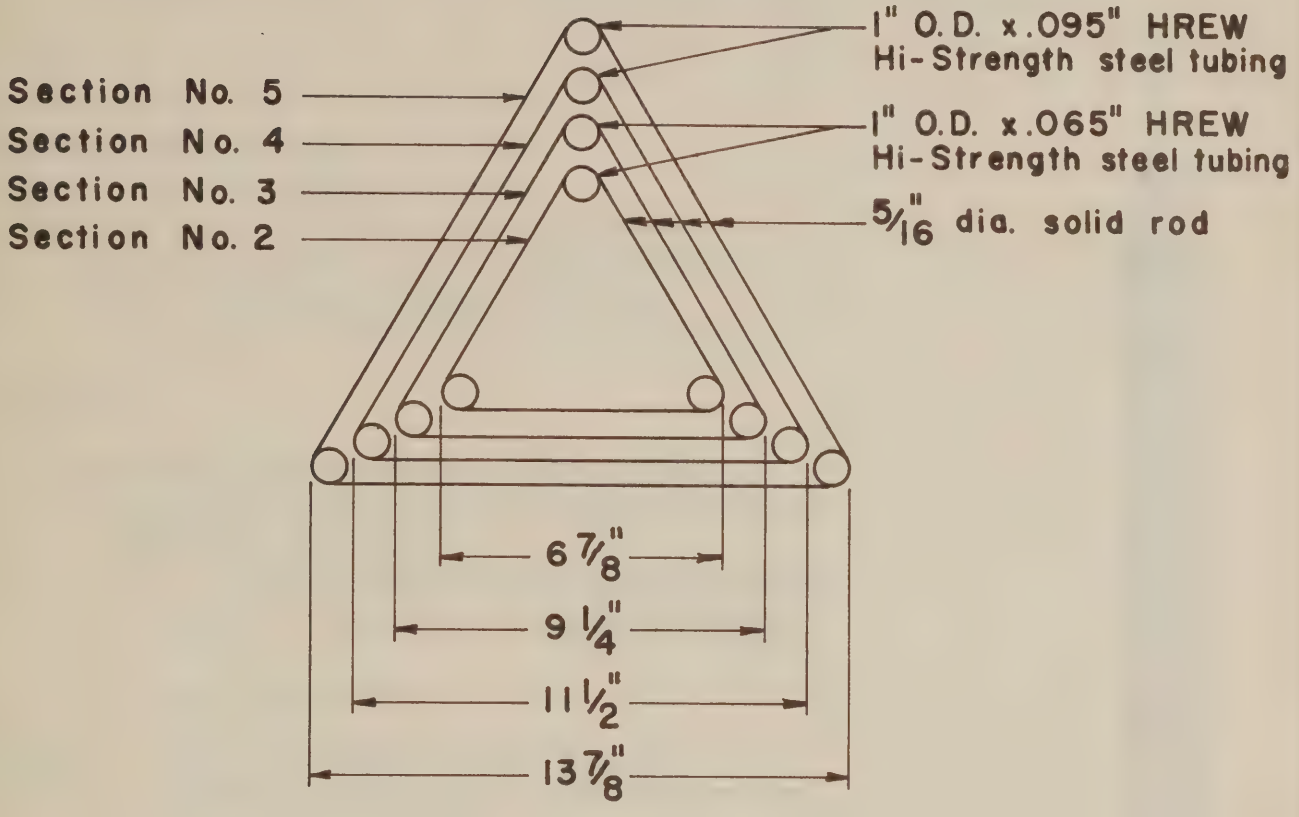
PHONE (209) 732-8383



TOWER MODEL	SECTIONS USED	HEIGHT	
		EXTD.	COLL.
MW-18	2-3	18'	10'-5"
MW-25	2-3-4	25'	10'-10"
MW-33	2-3-4-5	33'	11'-3"
MW-35	2-3	35'	20'-5"
MW-50	2-3-4	50'	20'-10"
MW-65	2-3-4-5	65'	21'-3"

Tri-Ex TOWER CORPORATION
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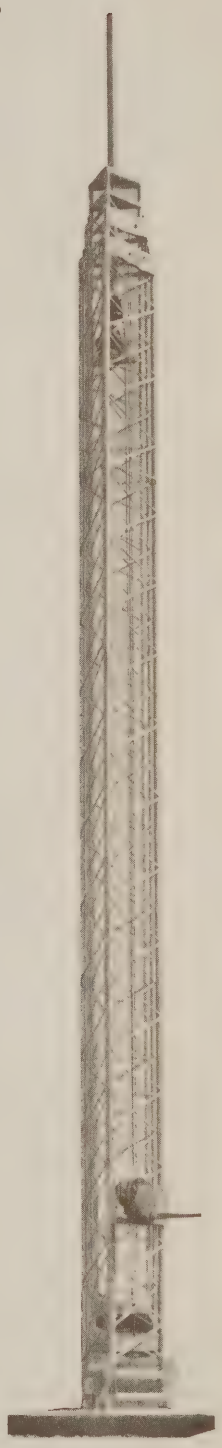
TITLE:
CROSS SECTION DETAIL (MW)

ISSUE: A-5-72

SHEET NO. 075

FREESTANDING "W" SERIES

SUPPORTS 9 SQ. FT. OF ANTENNA AREA IN 50 MPH WINDS



Model W-51

• FEATURES

Absolutely Free Standing
No guys or house bracket required
Telescopic cabling extends sections uniformly
CDR rotator mounting plate furnished in top section
"RIGID" Base Mount included with Tower
Top plate pre-drilled for TB-2 Thrust Bearing

• DESIGN

Aerodynamic design presents a pleasing profile
Unusual strength due to high strength steel tubing, solid rod steel bracing
"W" bracing configuration used throughout Tower
Capable of supporting most Amateur Beams

• CONSTRUCTION

Electrically welded in precision jigs
Latest slag-free welding equipment used by certified personnel
All steel conforms to ASTM specifications

• HOT DIPPED GALVANIZED FINISH •

MODELS WITH 20 FOOT SECTIONS

Model	Weight	Height Extended	Height Nested
W-36	215 lb.	36 ft.	20'-6"
W-51	355 lb.	51 ft.	21'-0"
W-67	650 lb.	67 ft.	22'-0"

MODELS WITH 10 FOOT SECTIONS

Model	Weight	Height Extended	Height Nested
W-18	120 lb.	18 ft.	10'-6"
W-25	180 lb.	25 ft.	11'-0"

Tri-Ex® TOWER CORPORATION
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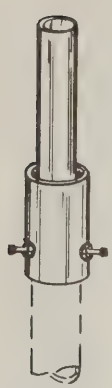
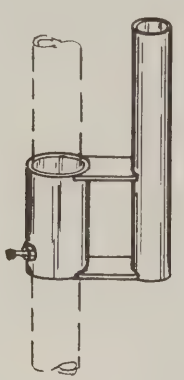
ACCESSORIES

TRI-EX MAST ADAPTORS

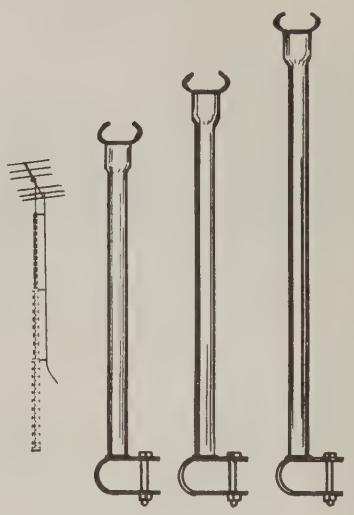

H-12


H-13

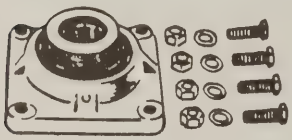
MODEL SIZE

H-12 ... 2" I.D. to 1 5/8" O.D. (top mount)
H-13 ... 2" I.D. to 1 5/8" O.D. (side mount)

COAX STANDOFF KIT
(Model CO-3)

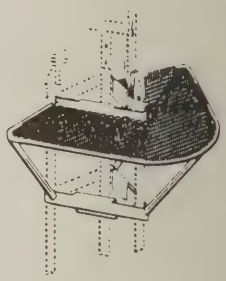


FLANGE THRUST BEARING FOR ANTENNA MAST MODEL TB-2



Takes weight of antenna and mast off rotating motor. Self-aligning, sealed ball-bearing type.

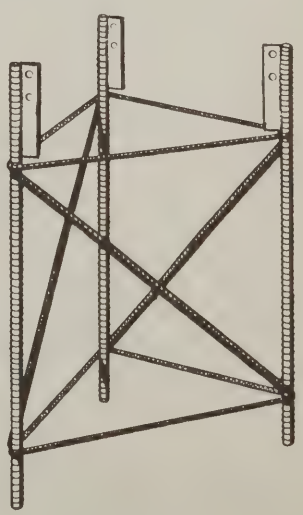
WORK PLATFORM
(Model H-8)



TRI-EX MASTS
(2" O.D. x .120" wall)

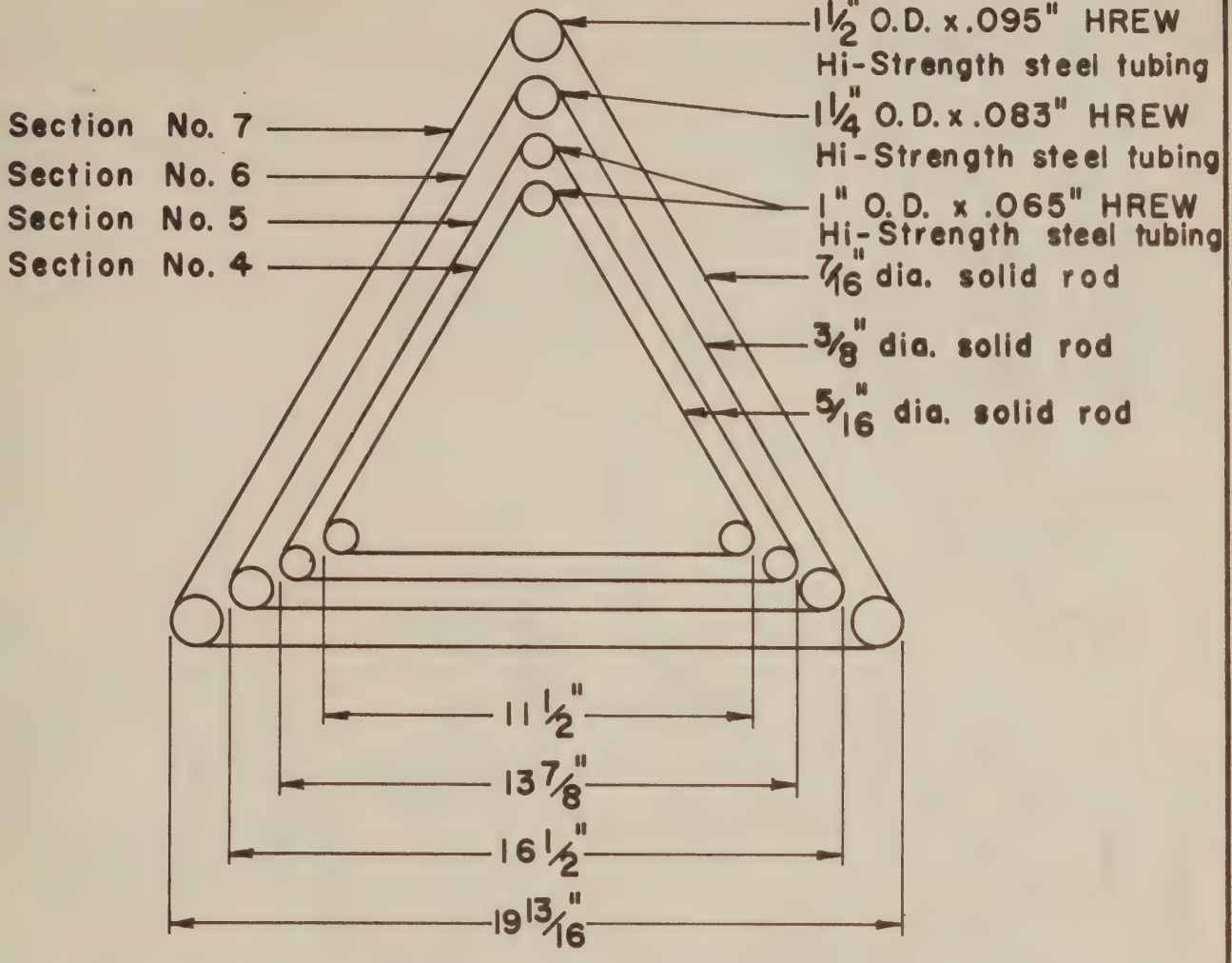
MODEL	LENGTH	WEIGHT
AD-50	5 ft.	12 lbs.
AD-100	10 ft.	25 lbs.

RIGID CONCRETE BASE MOUNT
(Included with Tower)



Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

REF. NO. W


Section No. 7
Section No. 6
Section No. 5
Section No. 4
1½" O.D. x .095" HREW Hi-Strength steel tubing
1¼" O.D. x .083" HREW Hi-Strength steel tubing
1" O.D. x .065" HREW Hi-Strength steel tubing
7/16" dia. solid rod
3/8" dia. solid rod
5/16" dia. solid rod
11 1/2"
13 7/8"
16 1/2"
19 13/16"

TOWER MODEL	SECTIONS USED	HEIGHT	
		EXTD.	COLL.
W-18	4-5	18'	10'-6"
W-25	4-5-6	25'	11'-0"
W-36	4-5	36'	20'-6"
W-51	4-5-6	51'	21'-0"
W-67	4-5-6-7	67'	22'-0"

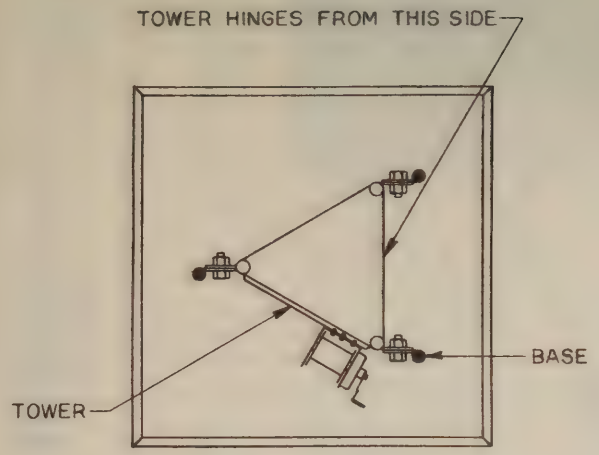
Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

TITLE:
CROSS SECTION DETAIL
(W)

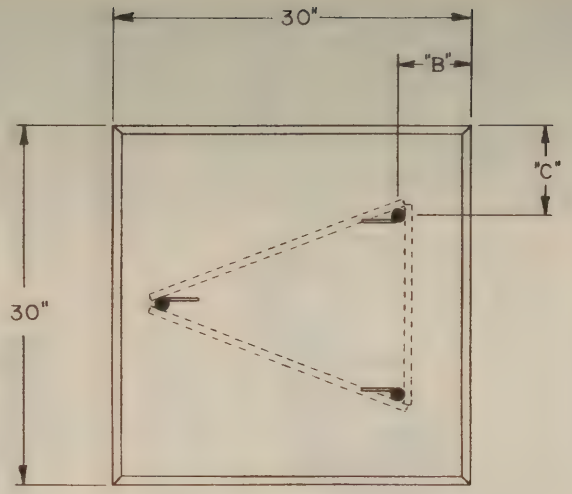
ISSUE: A - 5 - 72

SHEET NO. 065

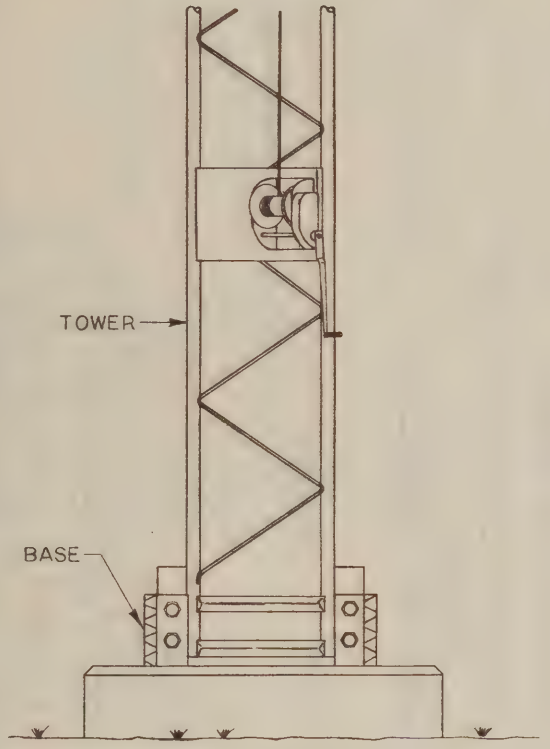
MODEL	"A"	"B"	"C"	CONCRETE REQ'D
W-18	4'-0"	6"	7½"	0.93 CU.YD.
W-25	4'-0"	5¼"	6¼"	0.93 CU.YD.
W-36	4'-6"	6"	7½"	1.04 CU.YD.
W-51	4'-9"	5¼"	6¼"	1.10 CU.YD.



PLAN VIEW

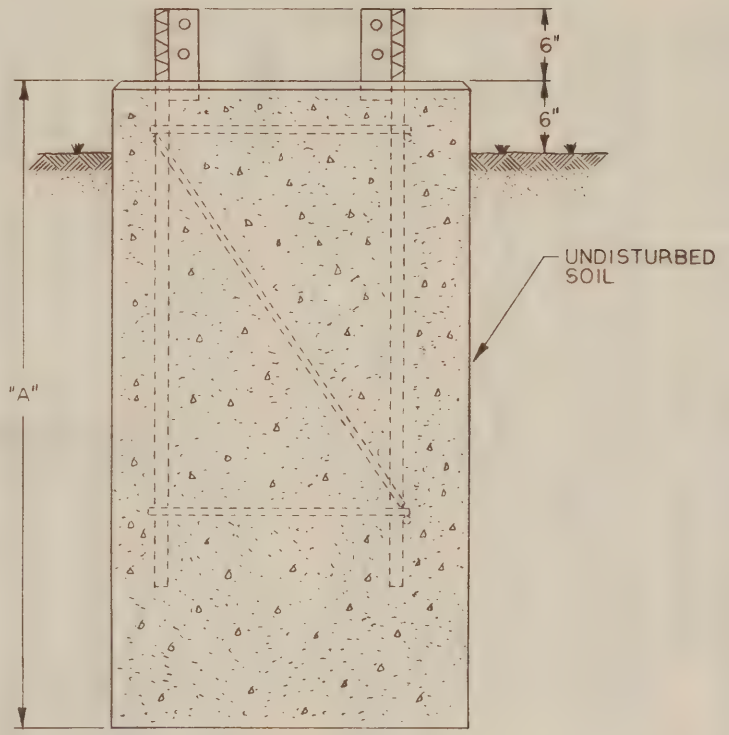


PLAN VIEW



ELEVATION

TOWER ON FOUNDATION



ELEVATION

FOUNDATION

NOTES:

1) BASE EARS MUST BE LEVEL ACROSS TOPS IN ORDER FOR TOWER TO BE PLUMB.

2) CONCRETE MIX SHALL BE DESIGNED TO PROVIDE A MINIMUM 28 DAY STRENGTH OF 2,000 PSI, AND SHALL CONTAIN NOT MORE THAN 7½ GALLONS OF WATER PER SACK OF CEMENT.

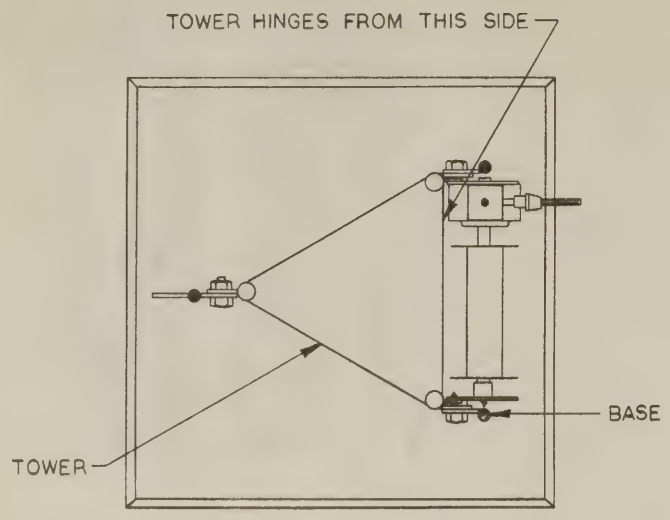
TRI-EX TOWER CORPORATION

SCALE:	APPROVED BY:	DRAWN BY R.C.
DATE: 10-5-71		REVISED

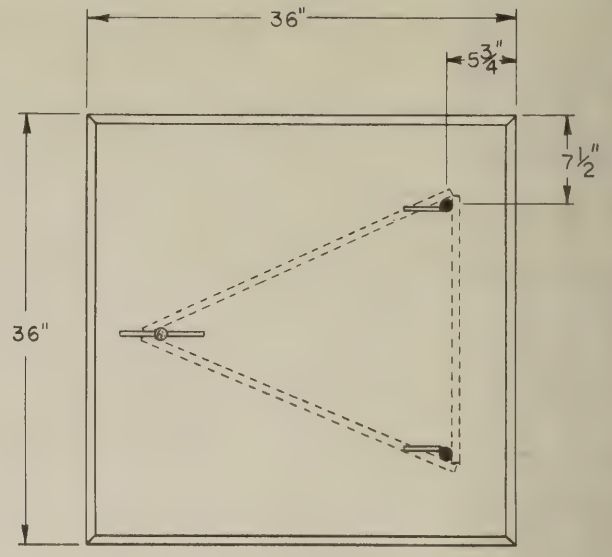
W-SERIES FOOTING DETAILS

DRAWING NUMBER G065-500-001

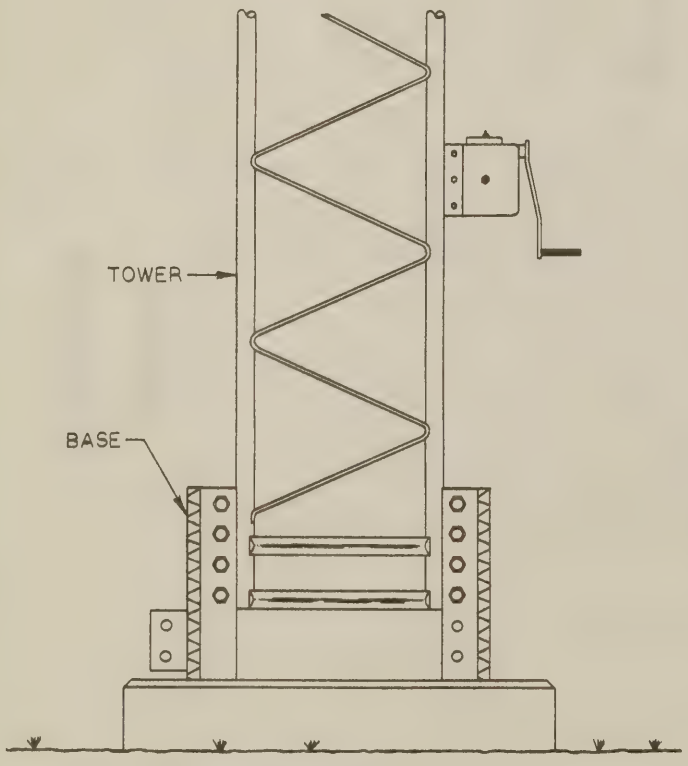
17X22 PRINTED ON NO. 1000H CLEARPRINT



PLAN VIEW

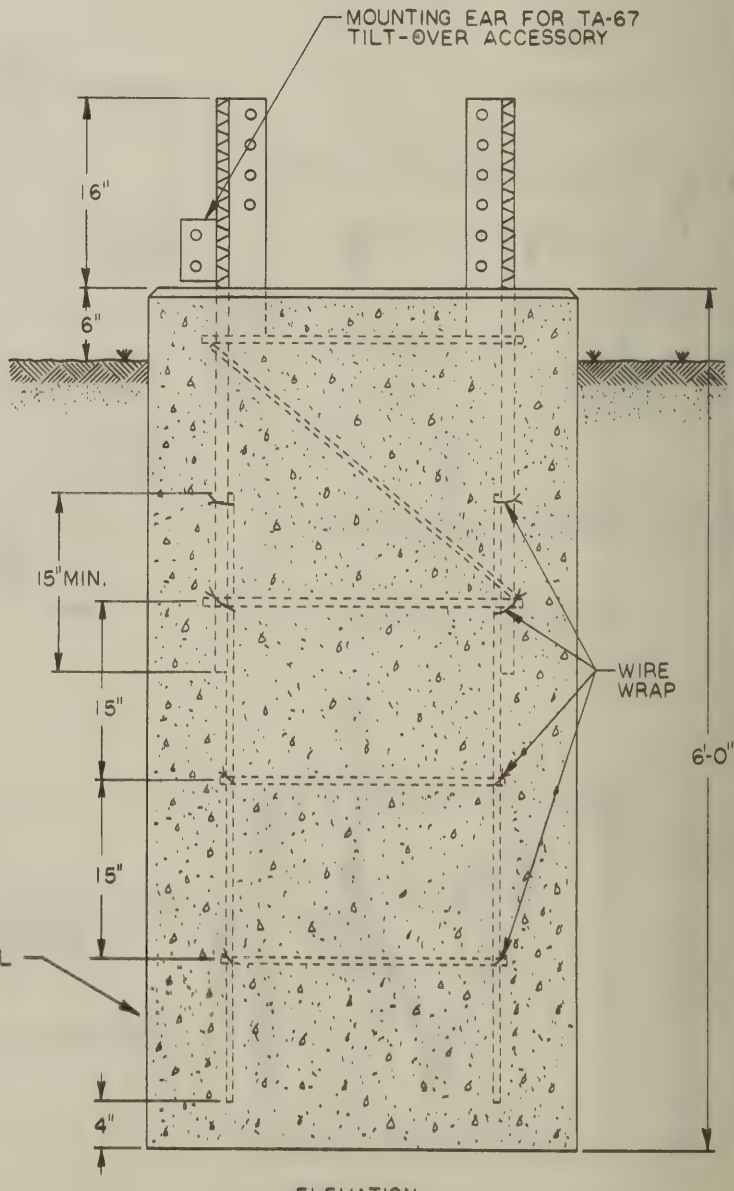


PLAN VIEW



ELEVATION

TOWER ON FOUNDATION



ELEVATION

FOUNDATION

NOTES:

1) 2.0 CU. YD. OF CONCRETE REQ'D.

2) BASE EARS MUST BE LEVEL ACROSS TOPS IN ORDER FOR TOWER TO BE PLUMB.

3) CONCRETE MIX SHALL BE DESIGNED TO PROVIDE A MINIMUM 28 DAY STRENGTH OF 2,000 PSI, AND SHALL CONTAIN NOT MORE THAN 7½ GALLONS OF WATER PER SACK OF CEMENT.

TRI-EX TOWER CORPORATION

W-67 FOOTING DETAILS

DATE: 10-6-71

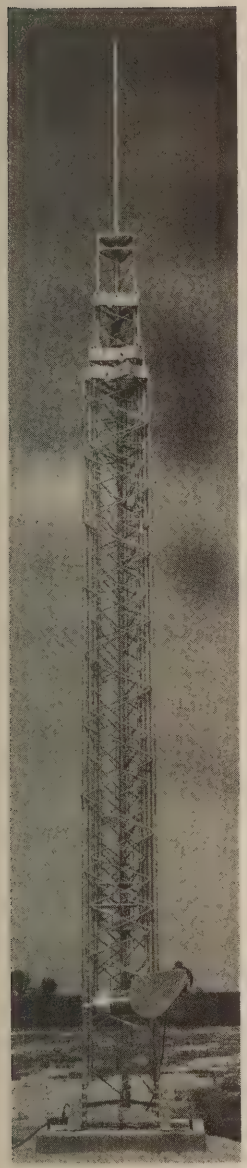
DRAWN BY R.C.

C-065-500002

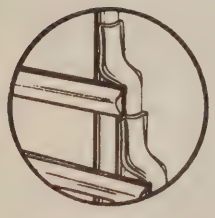
MODEL LM
Self-Supporting TOWERS

TRI-EX

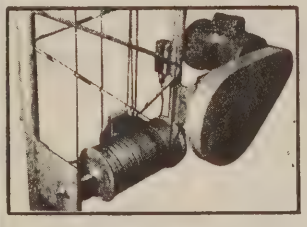
HAM and INDUSTRIAL CRANK-UP/TILT-OVER TOWERS



Model
LM-470D



DIE FORMED
SECTION GUIDES



LM-470D
MOTOR ASSEMBLY

"Shur-Worm"
Safety Winch

LM-237 and LM-354

The LM Towers are FREE Standing. No guys or other aids are needed to help support these towers.

Aerodynamic design presents a pleasing profile as well as absolute minimum wind drag. Features superior "W" bracing configuration of solid steel rod.

Capable of supporting 16 sq. ft. of antenna area at extended heights in 60 MPH winds.

Large Top Section (14" cross section), allows installation of all CDR (Ham-M), and small Prop-Pitch motors inside top section. Top mounting assemblies available for Telrex and Hy-Gain rotators.

"Positive Control" worm gear winch permits the raising and lowering of LM Towers without the aid of stops or locks. Models LM-237 and LM-354 are equipped with a 25:1 ratio winch. Models LM-470 and LM-470D use a 40:1 ratio winch. The LM-470D also includes a pre-wired motor control assembly.

The "RIGID" Concrete Base allows the LM Towers to be installed in a small plot area. Addition of the Tilt-Over Accessory for erecting or tilting the tower can be made at time of initial installation or at a later time.

FINISH: All LM Towers are HOT DIPPED GALVANIZED after fabrication.

Model	Weight	Height Extended	Height Nested
LM-237	325 lb.	37 ft.	20'-6"
LM-354	525 lb.	54 ft.	21'-0"
LM-470	975 lb.	70 ft.	23'-6"
LM-470D	1000 lb.	70 ft.	23'-6"

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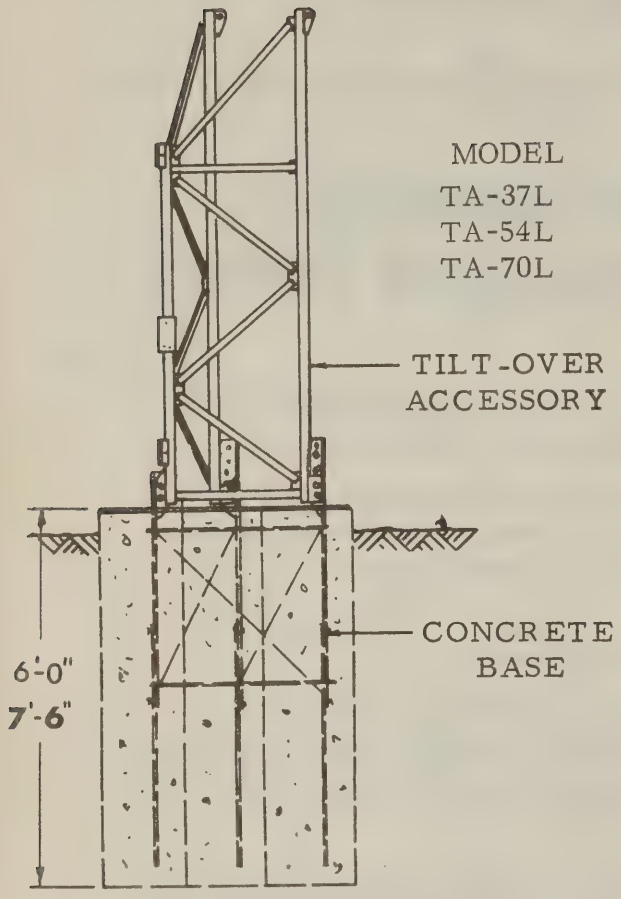
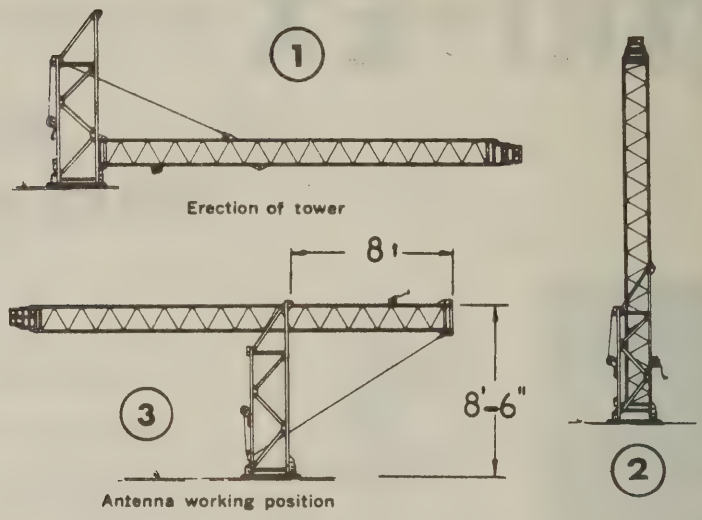
TILT-OVER ACCESSORY



3 Step Installation

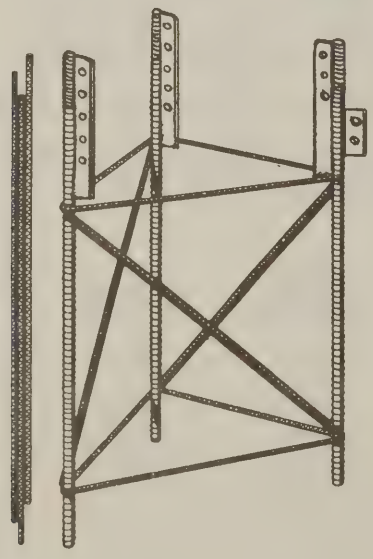


1. Attach Tower to base in horizontal position.
2. Stand Tower vertical with Tilt-Over base. (Use winch for raising.) Install hinge bolts at top of base.
3. Tilt Tower over into antenna installation or adjustment position.

NOTE: The winch does all the work.

TILT-OVER ACCESSORY

Model		Weight
TA-37L	for LM-237	120 lb.
TA-54L	for LM-354	125 lb.
TA-70L	for LM-470	130 lb.



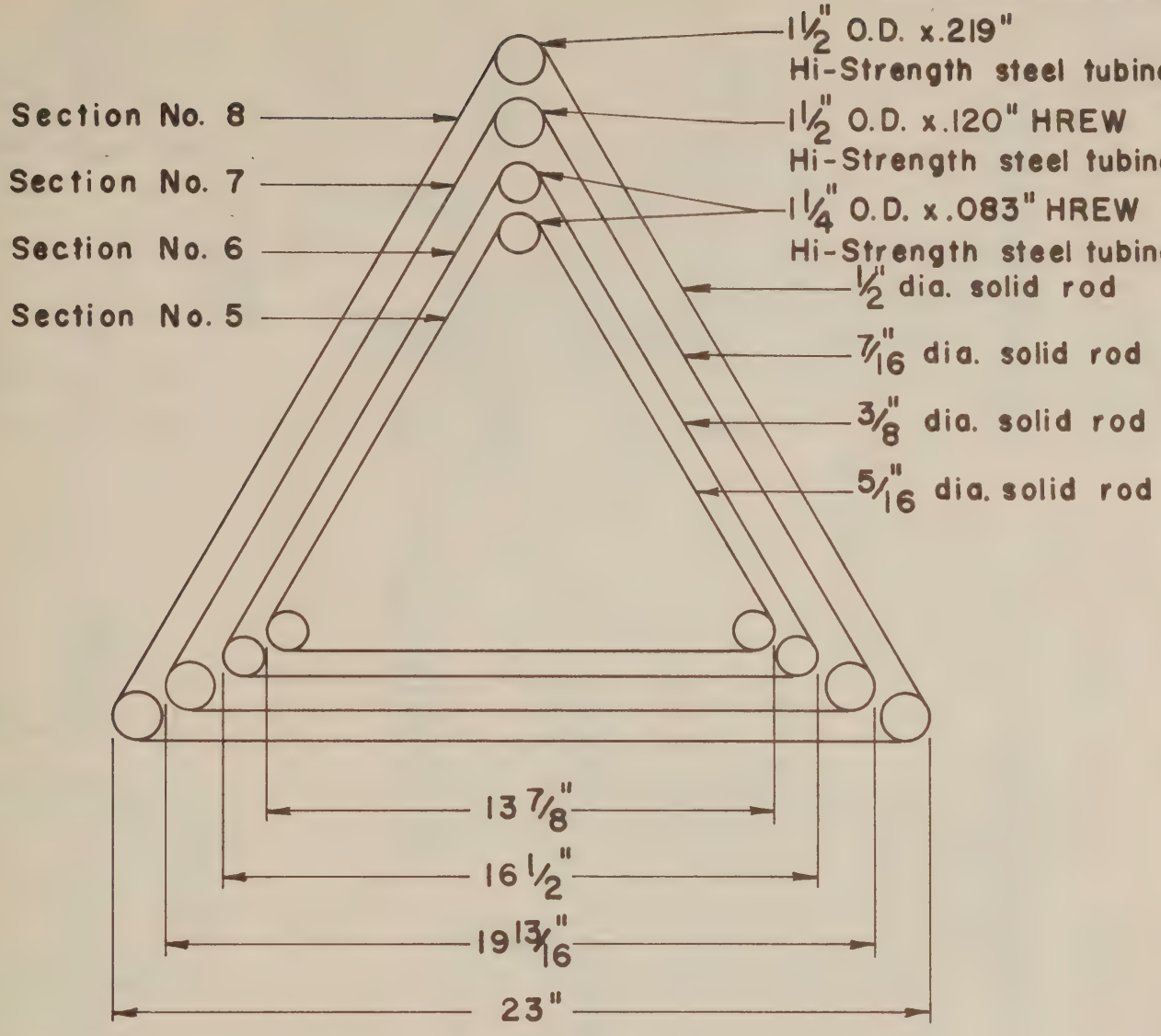
RIGID CONCRETE BASE MOUNT

The "RIGID" Concrete Base allows the LM Towers to be Fully Self-Supporting. If a tilt-over feature is desired, just bolt on the Tilt-Over Accessory. No new footing to pour. No new base to bury. One Concrete Base does both jobs.

Model		Weight
RCB-37LT	for LM-237	66 lb.
RCB-54LT	for LM-354	68 lb.
RCB-70LT	for LM-470	75 lb.

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

REF. NO. LM & HM



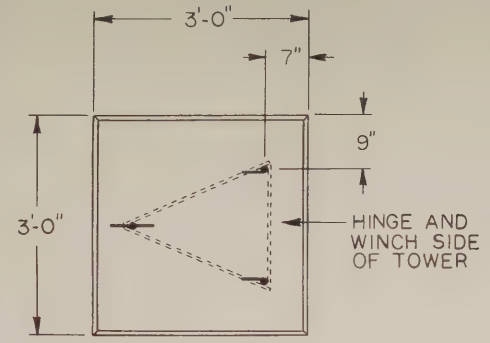
TOWER MODEL	SECTIONS USED	HEIGHT	
		EXTD.	COLL.
LM-237	5-6	37'	20'-6"
LM-354	5-6-7	54'	21'-0"
LM-470	5-6-7-8	70'	23'-6"
HM-237	6-7	37'	20'-6"
HM-354	6-7-8	54'	21'-0"

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

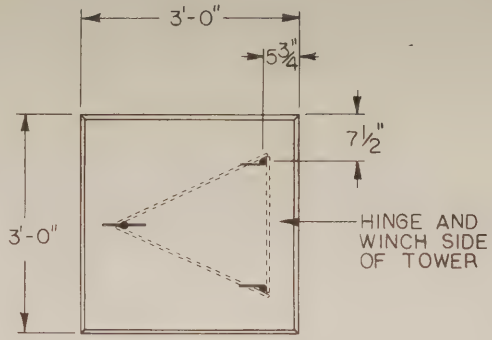
TITLE:
CROSS SECTION DETAILS
(LM & HM)

ISSUE: A-5-72

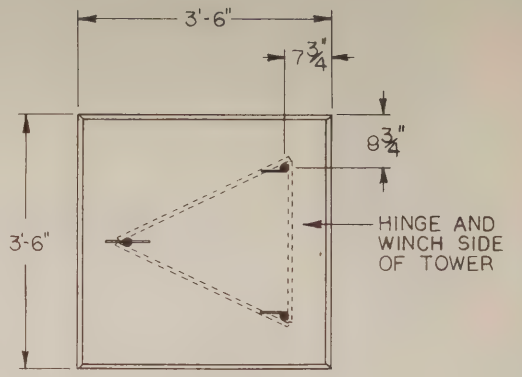
SHEET NO. 060-070



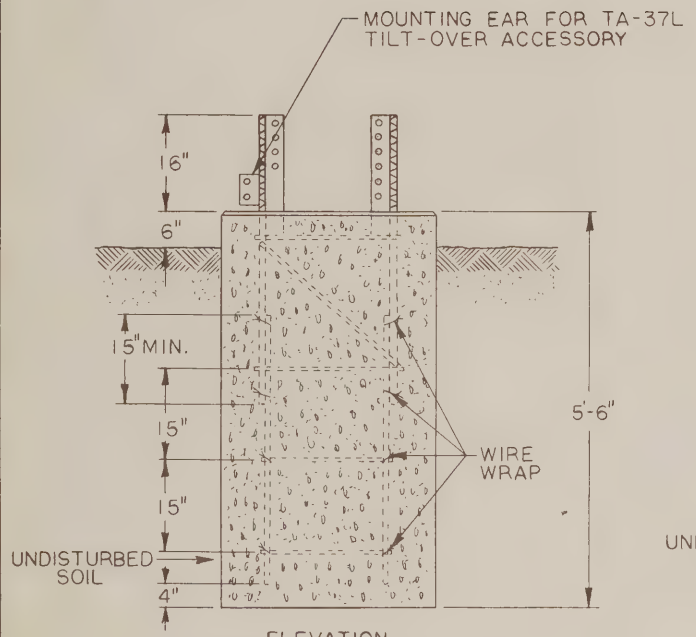
PLAN VIEW



PLAN VIEW



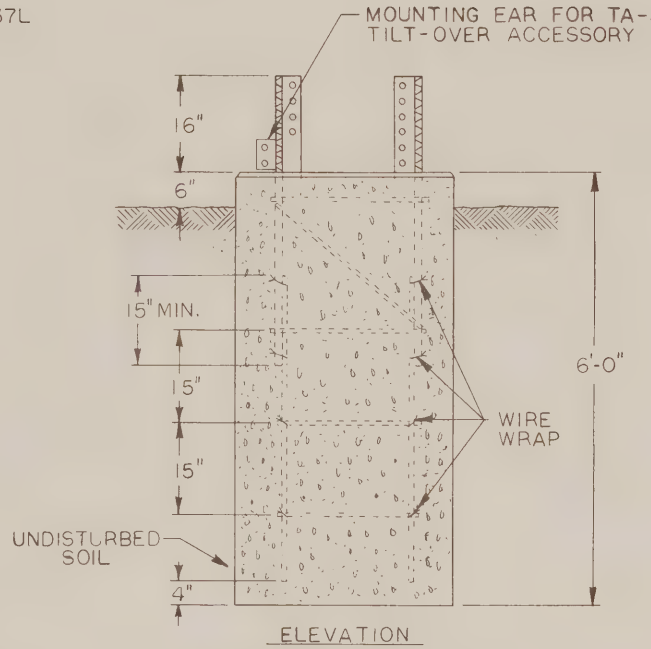
PLAN VIEW



ELEVATION

LM-237 FOUNDATION

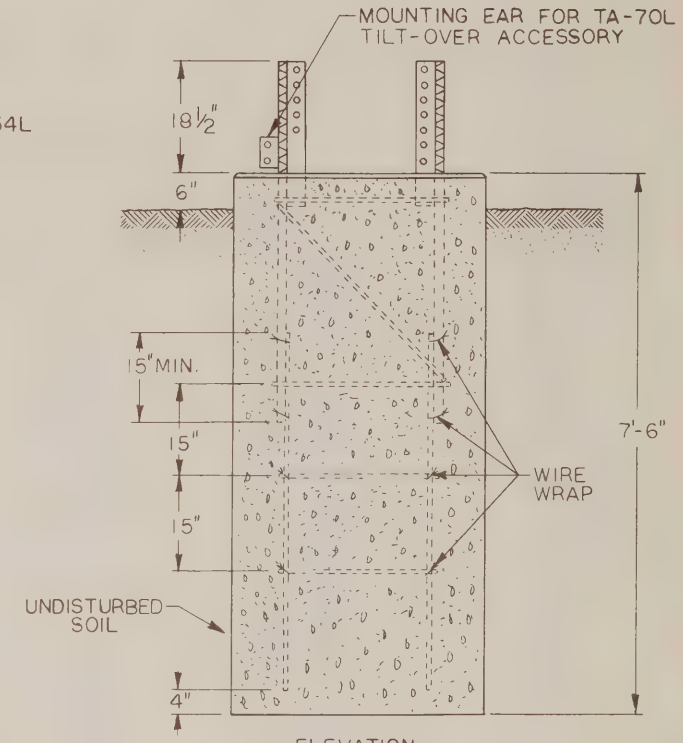
(CONCRETE REQ'D: 1.8 CU. YD.)



ELEVATION

LM-354 FOUNDATION

(CONCRETE REQ'D: 2.0 CU. YD.)



ELEVATION

LM-470 FOUNDATION

(CONCRETE REQ'D: 3.4 CU. YD.)

NOTES:

1) BASE EARS MUST BE LEVEL ACROSS TOPS IN ORDER FOR TOWER TO BE PLUMB.

2) CONCRETE MIX SHALL BE DESIGNED TO PROVIDE A MINIMUM 28 DAY STRENGTH OF 2,000 PSI, AND SHALL CONTAIN NOT MORE THAN 7½ GALLONS OF WATER PER SACK OF CEMENT.

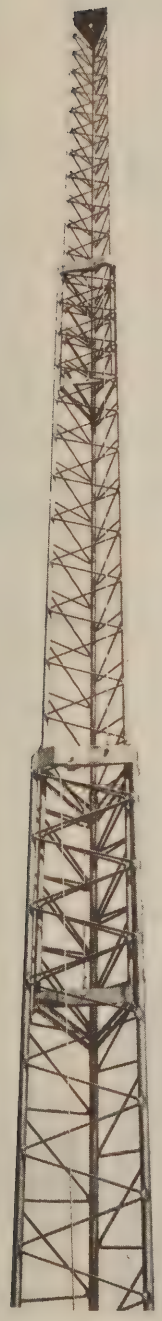
TRI-EX TOWER CORPORATION

SCALE:	APPROVED BY:	DRAWN BY R.C.
DATE: 10-8-71		REVISED

LM-SERIES FOOTING DETAILS

DRAWING NUMBER C-060-500-001

MODEL HM
Self-Supporting TOWERS



HAM and INDUSTRIAL CRANK-UP/TILT-OVER TOWERS

- The HM Towers are FREE Standing. No guys or other aids are needed to help support these towers.
- Aerodynamic design presents a pleasing profile as well as absolute minimum wind drag. Features superior "W" bracing configuration of solid steel rod.
- Capable of supporting 22 sq. ft. of antenna area at extended heights in 60 MPH winds.
- Extra large Top Section (16 1/2" cross section) allows the installation of antenna rotators inside top section.

  "Positive Control" worm gear winch permits the raising and lowering of HM Towers without the aid of stops or locks.
- The "RIGID" Concrete Base allows the HM Towers to be installed in a small plot area. Addition of the Tilt-Over Accessory for erecting or tilting the tower can be made at time of initial installation or at a later time.
- FINISH: All HM Towers are HOT DIPPED GALVANIZED after fabrication.

Model	Weight	Height Extended	Height Nested
HM-237	460 lbs.	37 ft.	20'-6"
HM-354	700 lbs.	54 ft.	21'-0"

Tri-Ex TOWER CORPORATION
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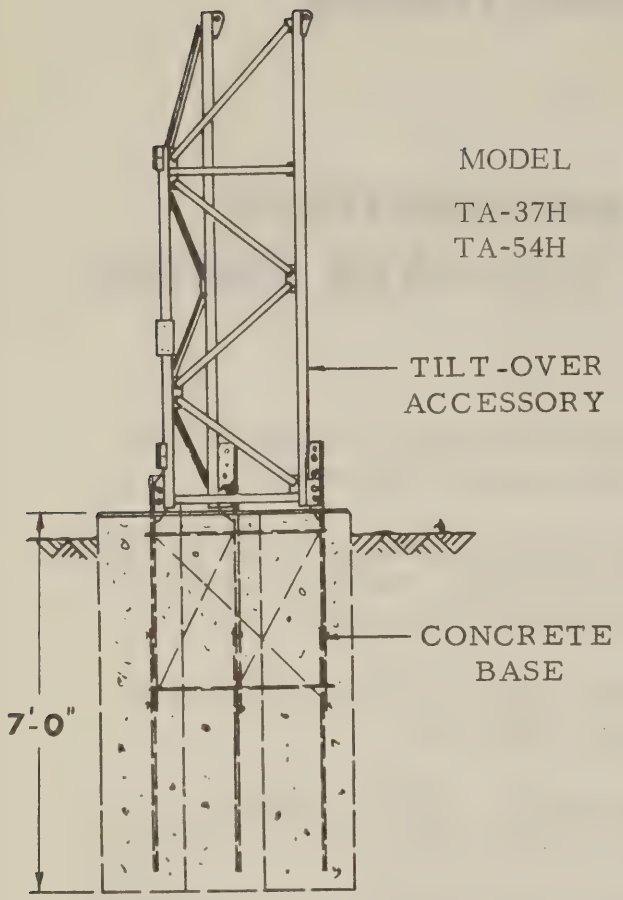
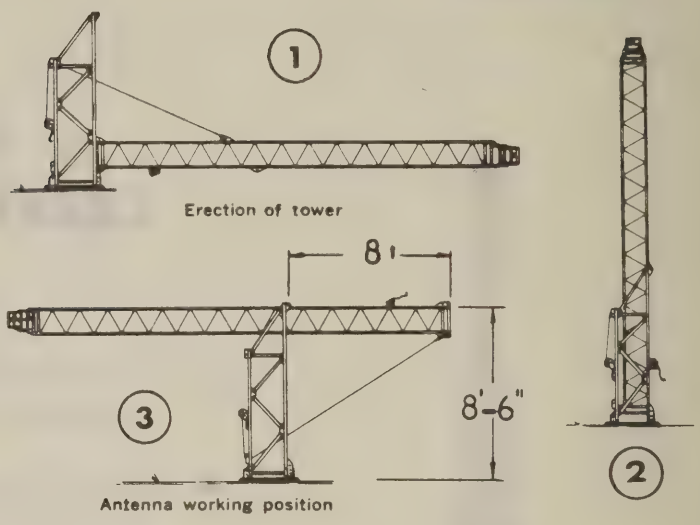
TILT-OVER ACCESSORY



3 Step Installation

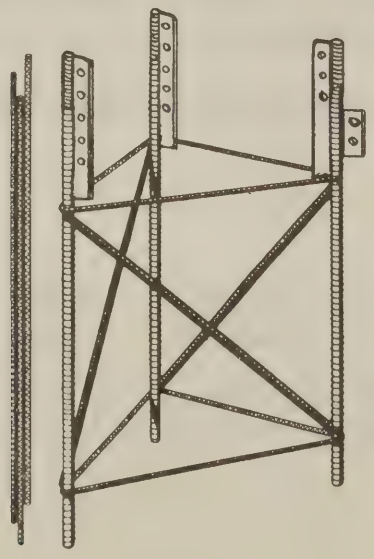


1. Attach Tower to base in horizontal position.
2. Stand Tower vertical with Tilt-Over base. (Use winch for raising.) Install hinge bolts at top of base.
3. Tilt Tower over into antenna installation or adjustment position.

NOTE: The winch does all the work.

TILT-OVER ACCESSORY

Model	Weight
TA-37H ... for HM-237	... 125 lbs.
TA-54H ... for HM-354	... 130 lbs.



RIGID CONCRETE BASE MOUNT

The New "RIGID" Concrete Base allows the HM Tower to be fully Self-Supporting. If the Tilt-Over feature is desired, just bolt on the Tilt-Over Accessory. No new footing to pour. No new base to buy. One Concrete Base does both jobs.

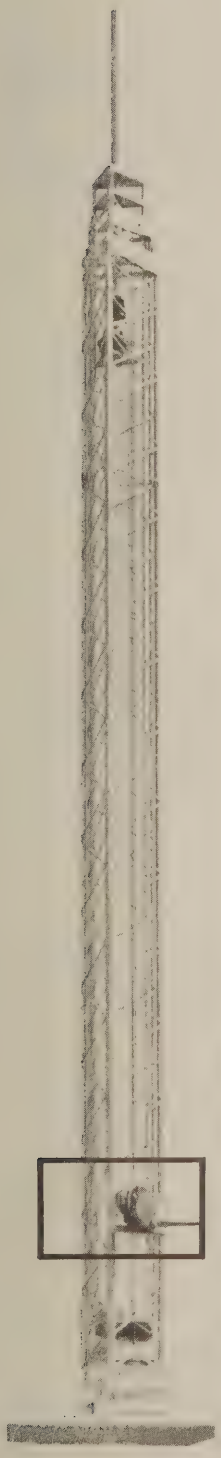
Model	Weight
RCB-37HT ... for HM-237	... 70 lbs.
RCB-54HT ... for HM-354	... 75 lbs.

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

New....

ELECTRIC REVERSIBLE WINCH

NOW CONVERT YOUR TOWER WITH THE NEWEST ELECTRIC WINCH SYSTEM AVAILABLE ANYWHERE



SAFE .....

NO SPINNING HANDLES, SLIPPING CLUTCHES OR EXPOSED GEARS. OPERATES ON 12 VOLTS DC.

AUTOMATIC BRAKING .....

BRAKING IS IMMEDIATE. NO COASTING OR CREEPING STOPS INSTANTANEOUSLY.

REVERSIBLE .....

WINCH HAS FORDWARD AND REVERSE SPEEDS FOR RAISING AND LOWERING YOUR TOWER.

EASILY INSTALLED .....

COMPLETELY ASSEMBLED FOR ONE STEP INSTALLATION. BOLTS DIRECTLY ONTO EXISTING TOWER WINCH MOUNTING FRAME.

NO MAINTENANCE .....

THE GEAR TRAIN AND BEARINGS ARE PACKED IN LUBRICANT AND SEALED FOR LIFE. NO ADDITIONAL GREASE, MAINTENANCE OR REPLACEMENT REQUIRED.

MODEL TC-1500

MODEL NO.	DESCRIPTION
TC-1500-BP	12 VOLT WINCH UNIT, COMPLETE WITH: BATTERY, WEATHER TIGHT CASE, 110V AC BATTERY CHARGER, AND POWER CABLES.
TC-1500	12 VOLT WINCH UNIT AND POWER CABLES ONLY. (LESS 12 VOLT POWER SUPPLY KIT)

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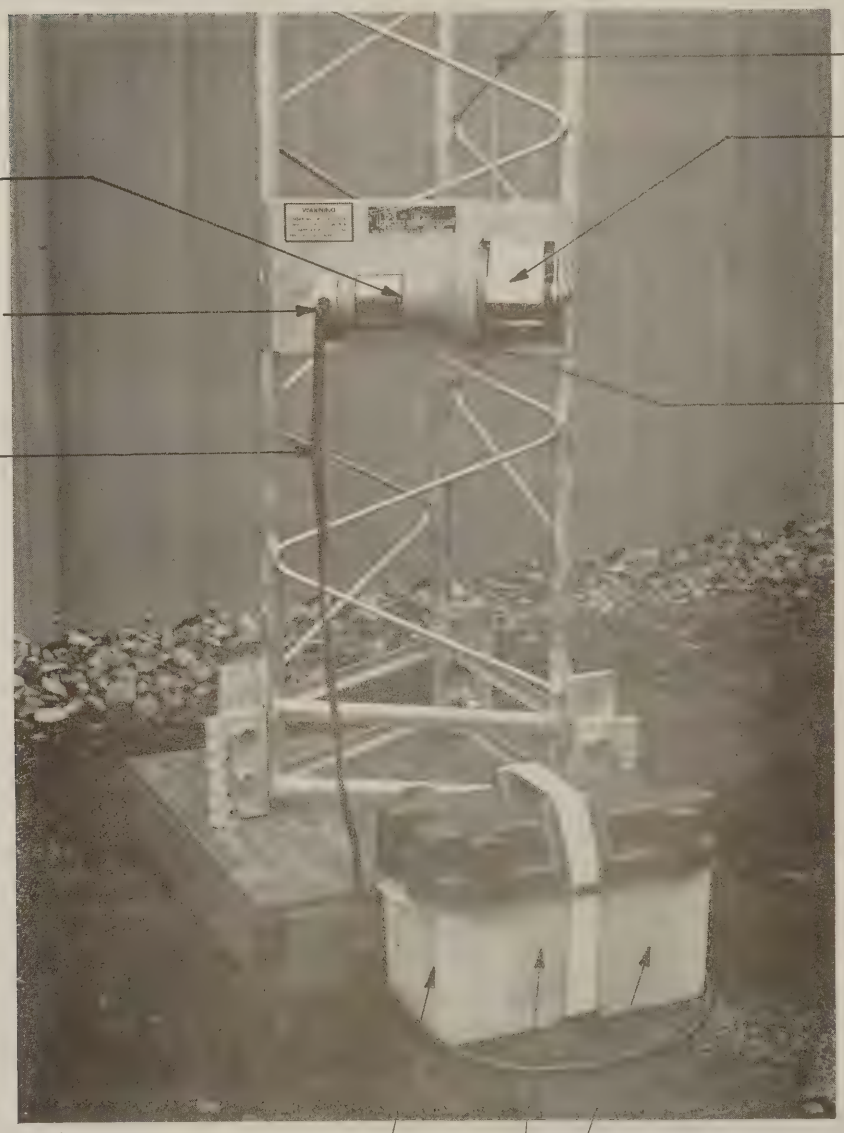
MODEL TC-1500-BP

12 VOLT DC WINCH UNIT WITH POWER SUPPLY KIT


TOWER CABLE
LEVEL WIND ASSEMBLY
12 VOLT DC MOTOR
CONTROL SWITCH
WINCH GEAR TRAIN
POWER CABLES
WEATHER TIGHT BATTERY CASE
12 VOLT BATTERY (INSIDE CASE)
110 V AC BATTERY TRICKLE CHARGER (INSIDE CASE)

Tri-Ex® TOWER CORPORATION
7182 Rasmussen Avenue
Visalia, Calif. 93277
Ph: (209) 732-8383

New.... DRILL DRIVEN WINCH

AUTOMATIC BRAKING .....

THE TDD-1000 WINCH, WHEN STOPPED AT ANY POINT, WILL HOLD A LOAD INDEFINITELY. (AN AVERAGE CONSUMER QUALITY 3/8" DRILL CAN BE UTILIZED TO DRIVE THE WINCH.)

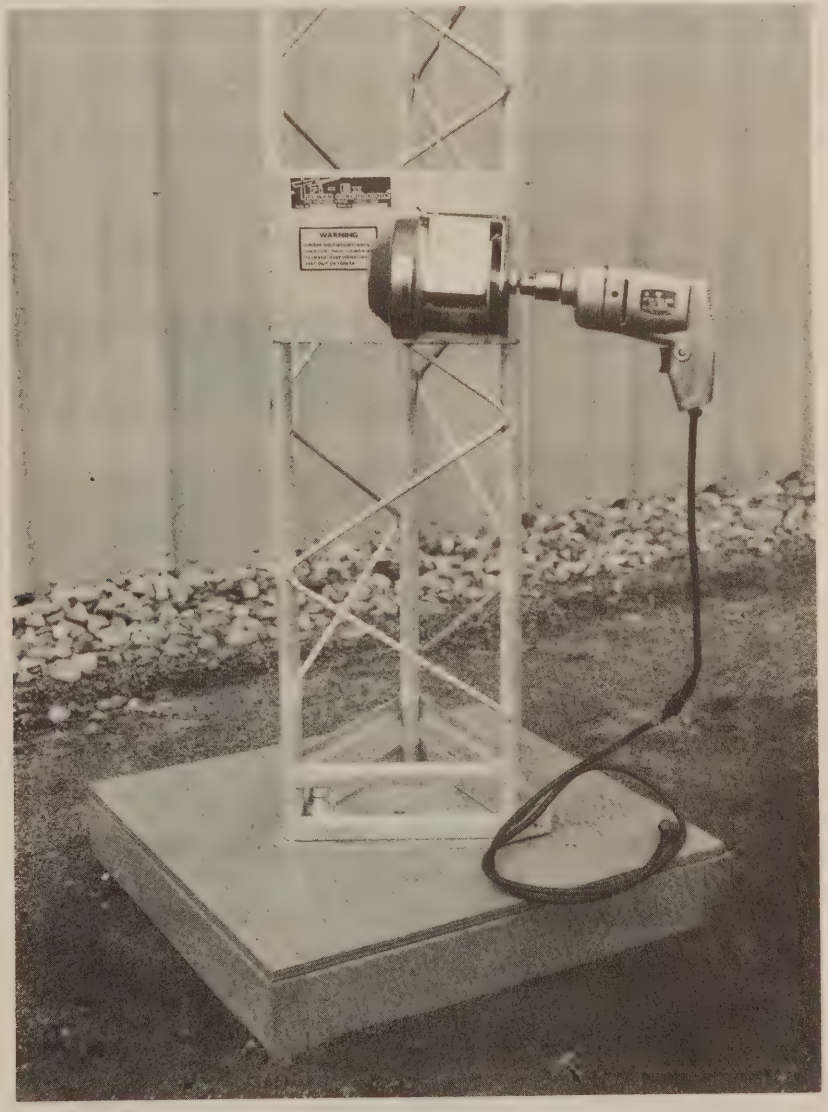
REVERSIBLE .....

TWO DRIVE BITS (for 3/8" chucks) ARE FURNISHED WITH THE TDD-1000 WINCH. THE LONG BIT IS INSERTED INTO THE GEAR TRAIN TO RAISE THE LOAD. IF DRILL IS REVERSIBLE, FINE. IF NOT, CHANGE BITS AND INSERT SHORT DRIVE BIT INTO OPPOSITE END TO LOWER THE LOAD.

MODEL NO.
TDD-1000

NOTE: DRILL MOTOR NOT SUPPLIED WITH WINCH UNIT

SHIPPING WEIGHT .. 10 1bs.



MODEL NO. TDD-1000

Tri-Ex® TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

New.....

SAFETY LOCK FIXTURE*
FOR CRANK-UP TOWERS

TRI-EX'S NEW "SAFETY LOCK" FIXTURE LETS YOU LOCK YOUR SELF-SUPPORTING CRANK-UP TOWER AT ANY HEIGHT.

FEATURES .....

POSITIVE SPRING ACTUATED MOVEMENT

"LOCKS" CONTROLLED FROM GROUND LEVEL

FIXTURES CAN BE ASSEMBLED IN MINUTES

BOLTS DIRECTLY ONTO YOUR TOWER. NO DRILLING OF HOLES REQUIRED

RELIEVES CABLE LOADS FROM TOWER WINCH

SAFETY LOCK FIXTURES MOUNTED ON TOWER

*PATENT PENDING

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

SAFETY LOCK FIXTURES ARE SPRING ACTUATED TO RELEASE INTO AN OPEN POSITION WHEN TOWER SECTION WEIGHT IS RELIEVED FROM EACH FIXTURE.

(SEE ILLUSTRATION AT RIGHT)

THESE UNITS WILL ALSO ADAPT ONTO OTHER MANUFACTURED TOWERS WITH A TELESCOPIC CABLING SYSTEM.

A SINGLE CONTROL LINE LETS YOU "LOCK" ALL FIXTURES AT ONE TIME. SECTIONS CAN BE STOPPED AND "LOCKED" AT ANY HEIGHT INTERVAL AS SET BY THE SECTION BRACE SPAN.

(SEE ILLUSTRATION BELOW)

"LOCKED" POSITION

OPEN POSITION

THE "SAFETY LOCK" FIXTURE IS AVAILABLE AS FOLLOWS...

MODEL	TOWER TYPE
SL-1	(2) SECTIONS
SL-2	(3) SECTIONS
SL-3	(4) SECTIONS

ASSEMBLIES ARE COMPLETE WITH MOUNTING BOLTS AND CONTROL LINE.

"SL" UNITS MOUNT ONTO THE FOLLOWING TRI-EX TOWERS;

SL-1	SL-2	SL-3
37-TC	MW-25	MW-3
MW-18	MW-50	MW-6
MW-35	W-25	W-67
W-18	W-51	
W-36	LM-354	
LM-237		

All prices subject to change without notice.

Tri-Ex® TOWER CORPORATION

7182 Rasmussen Avenue
Visalia, Calif. 93277
Ph: (209) 732-8383

HAM and INDUSTRIAL Self-Supporting TOWERS

HZN SERIES
EXTRA LARGE DELUXE CRANK-UP TOWER

Here is the ultimate in crank-up tower design, engineered to support large 10, 15, and 20 meter "ham" beams. Bringing to you greater strength and added weight, this tower meets and surpasses RETMA and UBC Building Standards.

The HZN towers feature heavy, formed steel horizontal members plus full, X-sway bracing throughout for maximum strength and rigidity. In addition, the top section is large enough to hold a prop-pitch or other large rotor motor for rotating your antenna.

As an added *exclusive* value, all Tri-Ex HZN towers feature "telescopic-operation." As the tower is cranked up or down, all sections raise or lower together under full control of raising cables at all times! This means faster, better, more efficient operation at *any* height above 20 feet.

The tower is equipped with a 40 to 1 Timken roller bearing, sealed, worm gear drive raising winch plus an extra-large 5" diameter cable drum. With the use of Tri-Ex accessories, you may motorize this tower for manual or remote control. Also, if desired at a later date, you may add our Tri-Ex rotating base and rotating ring to make this model into a rotating tower.

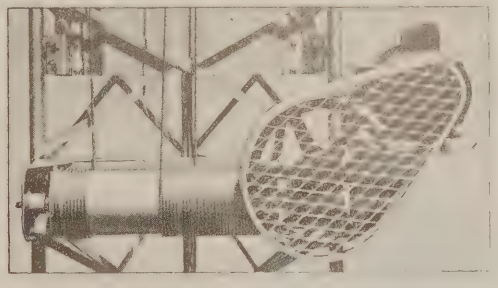
All TOWERS GALVANIZED

Models HZ-237N and HZ-354N are self-supporting when used with our special Base Mounts TBC-37N or TBC-54N or Tripod Support, as listed below. Model HZ-471N is self-supporting when used with our special Tripod Support, as listed below. However, Model HZ-588N requires one set of guy wires plus our Tripod Support as listed below.

All HZN Series towers are shipped complete with crank. Detailed engineering data and calculations are available upon request.

NEW ROLLER GUIDES

New roller guides enable tower to be cranked or motorized up and down smoothly, silently, and easily.



MOTOR UNIT AVAILABLE

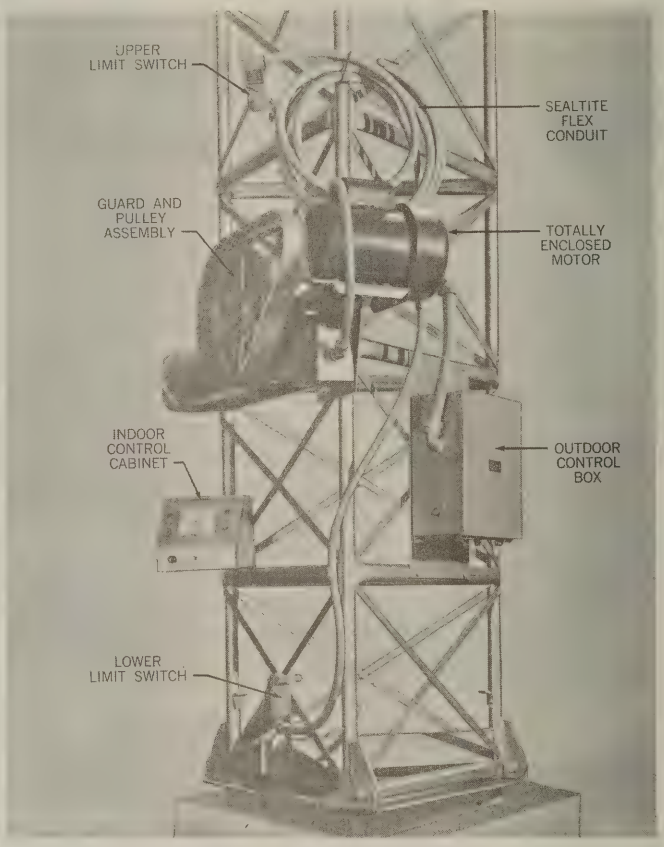
Model	Height Extended	Height Collapsed	Width	Weight
HZ-237N	37'	20'5"	17⅞"	430 lbs
HZ-354N	54'	20'11"	21 5/16"	750 lbs.
HZ-471N	71'	21'6"	26"	1050 lbs.
HZ-588N	88'	22'1"	30 1/16"	1635 lbs.
TBC-37N Base Mount				53 lbs.
TBC-54N Base Mount				55 lbs.
Tripod Support				100 lbs.

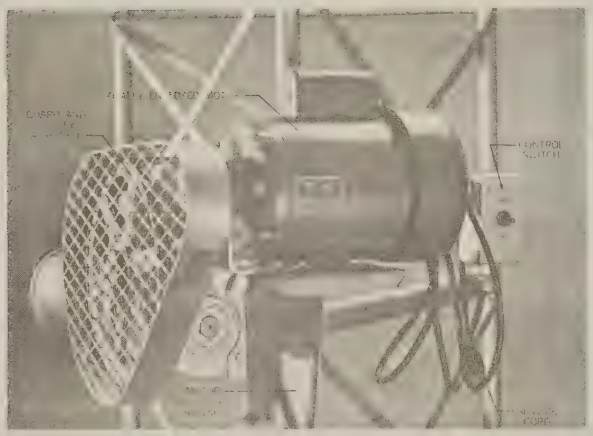
MOTORIZED CONTROL UNITS FOR HZN SERIES DELUXE CRANK-UP TOWERS

Motorized Control Tower Raising and Lowering Unit for HZN Series

Model RLH-75 (Illustrated at right)

Includes pulleys, belt, brackets, indicators, controls, and ¾ h.p. totally enclosed raising motor, completely wired.





Manual Control Tower Raising and Lowering Unit For HZN Series

Model MC-75 (Illustrated Above)

Includes pulleys, belt, brackets, ¾ h.p. totally enclosed raising motor, and weather-proof reversing switch, completely wired.

Standoff Kits for Fastening Coax To All Tri-Ex Towers

CO-2 Standoff Kit for All 2 Section or 37′ Tri-Ex Towers
CO-3 Standoff Kit for All 3 Section or 54′ Tri-Ex Towers
CO-4 Standoff Kit for All 4 Section or 71′ Tri-Ex Towers
CO-5 Standoff Kit for All 5 Section or 88′ Tri-Ex Towers

BMP-61 Winch raising and lowering kit.

(Illustrated at Left)

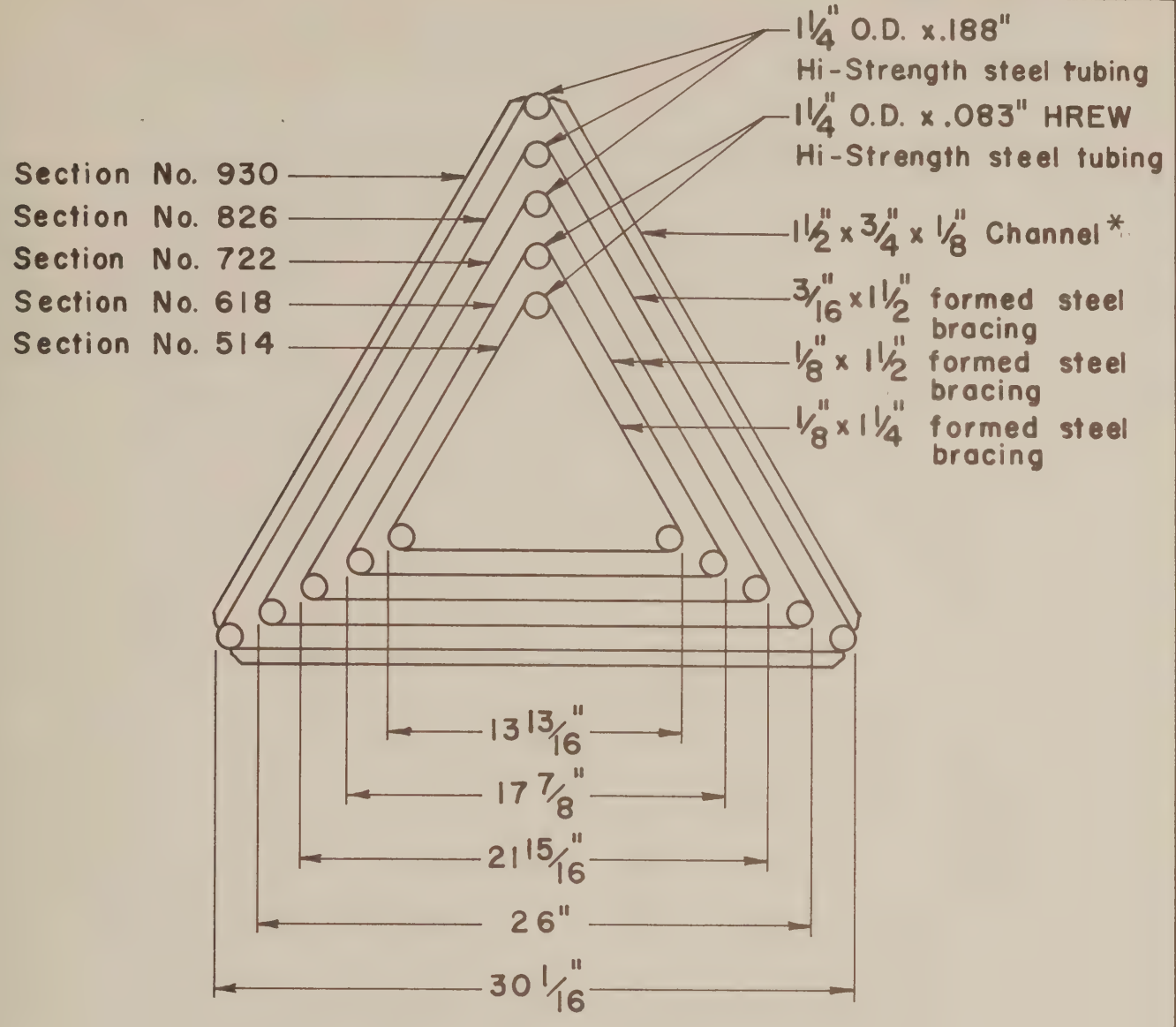
For all HZ-N and HZR-N Models. (Use ¾ H.P. motor) Includes guard, belt, pulleys, motor mounting bracket and all necessary bolts.

Weight — 18 lbs.

Shipped less motor.

All Remote Raising and Lowering Units shipped complete with desk type control box with direction and height indicators, less control cable required from Tower to transmitter site.

REF. NO. HZN



* Channel brace used on outside section of all tower models.

TOWER MODEL	SECTIONS USED	HEIGHT	
		EXTD.	COLL.
HZ-237N	514-618	37'	20'-5"
HZ-354N	514-618-722	54'	20'-11"
HZ-471N	514-618-722-826	71'	21'-6"
HZ-588N	514-618-722-826-930	88'	22'-1"
HZR-237N	514-618	37'	20'-5"
HZR-354N	514-618-722	54'	20'-11"
HZR-471N	514-618-722-826	71'	21'-6"

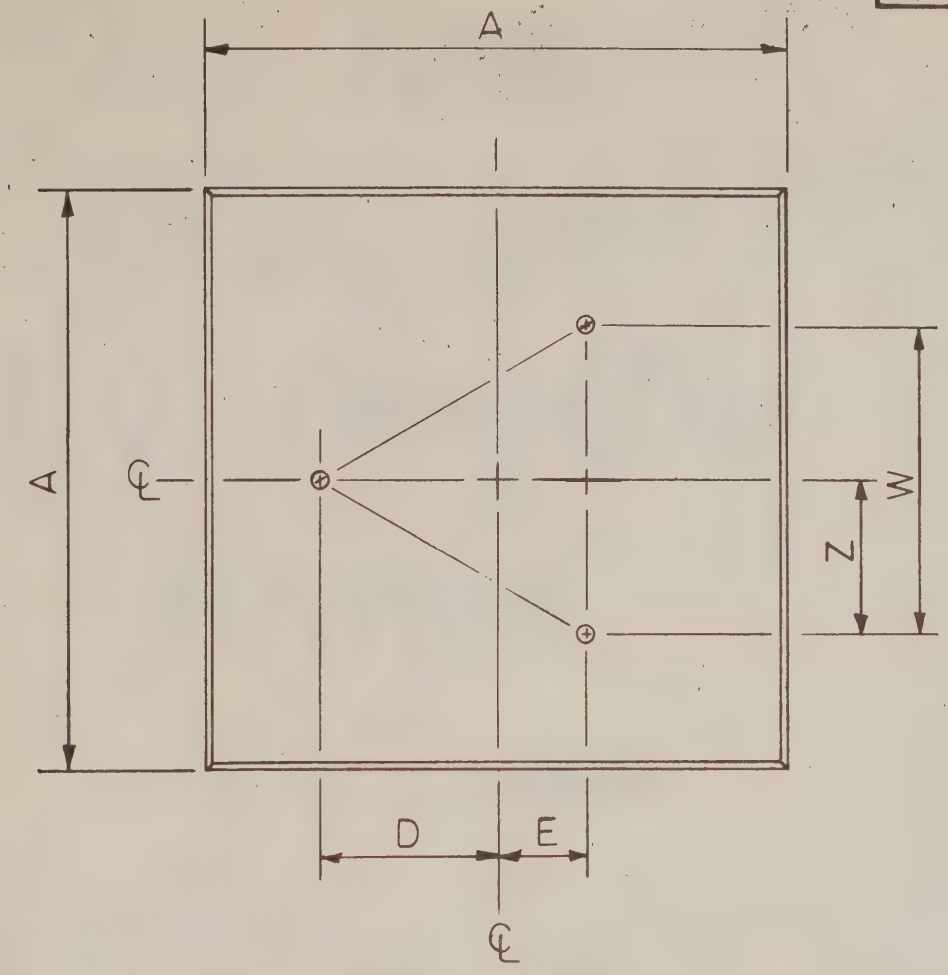
Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

TITLE:
CROSS SECTION DETAILS
(HZN & HZRN)

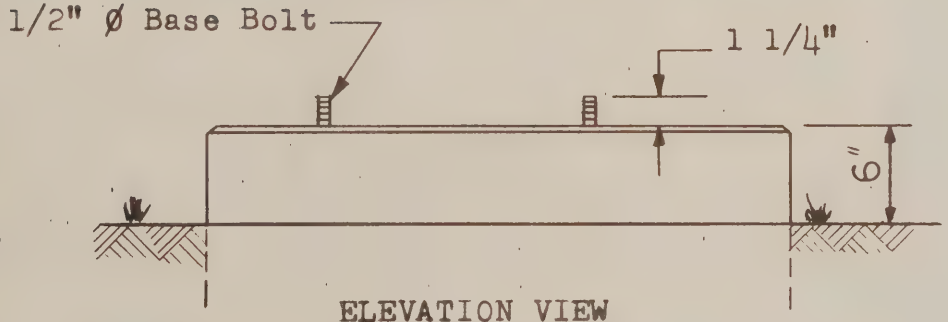
ISSUE: A - 5 - 72

SHEET NO.080-090

REF. NO. HZN



PLAN VIEW



ELEVATION VIEW

MODEL	A	D	E	W	Z
HZ-237N	30"	7 5/8"	3 13/16"	13 1/8"	6 9/16"
HZ-354N	33"	9 15/16"	4 7/8"	17 3/16"	8 19/32"
HZ-471N	36"	12 1/4"	6 1/8"	21 1/4"	10 5/8"
HZ-588N	42"	14 1/2"	7 1/4"	25 1/16"	12 17/32"

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

TITLE:
BASE BOLT LOCATIONS
HZN & HZRN TOWERS

ISSUE: A/6-63
B/11-66
SHEET NO.

REF. NO. HZN

NOTE:
7'-2 5/8" is standard for all towers, and is measured from tower base bolt hole to center of tripod footing.

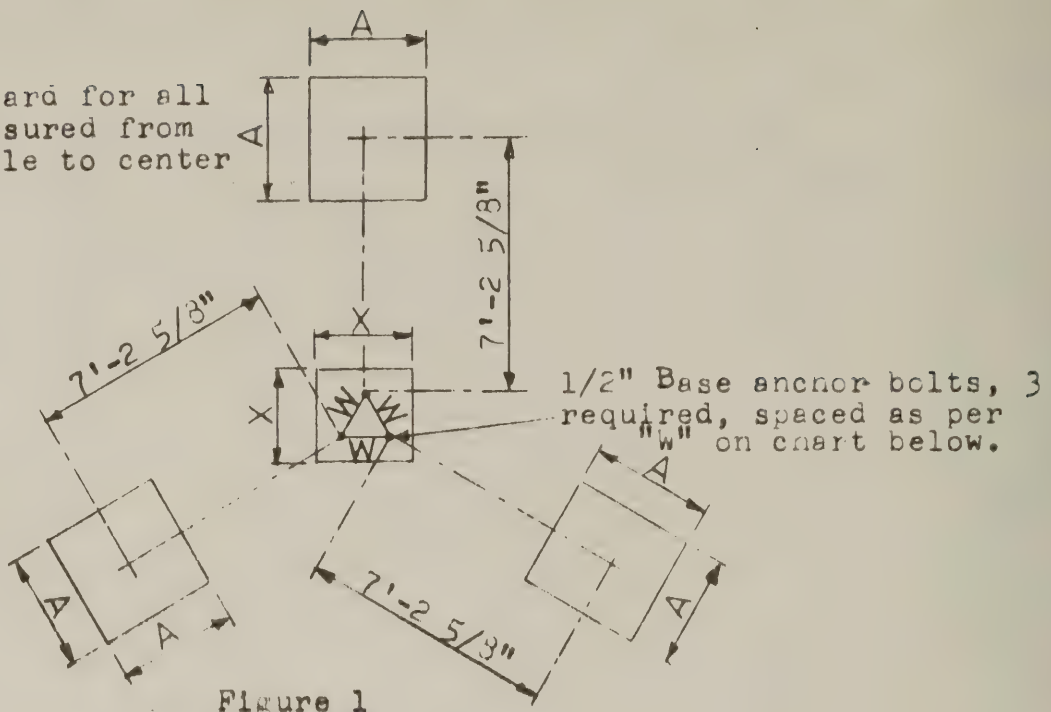


Figure 1

NOTE:
Top of tower footing is 6" above grade

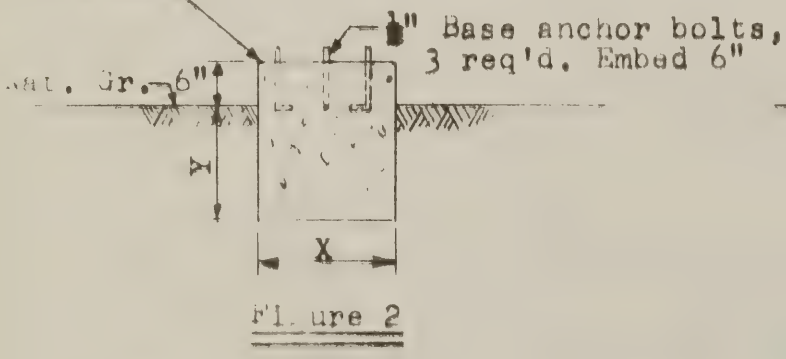


Figure 2

Section Through Tower Footing

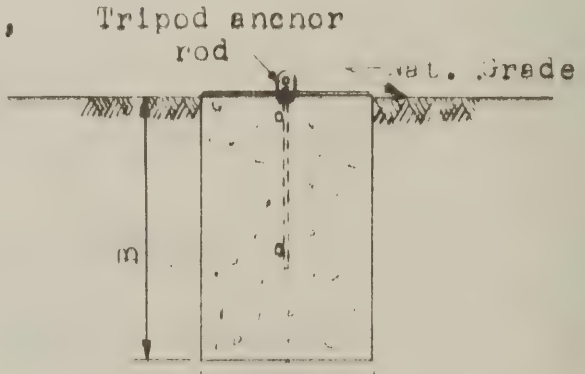


Figure 3

Section Through Tripod Footing

	Tower Footing			Tripod Footing	
Model	W	X	Y	A	B
HZ-237N	13 1/8"	2' - 6"	3' - 0"	2' - 0"	4' - 0"
HZ-354N	17 3/16"	2' - 9"	3' - 0"	3' - 0"	4' - 0"
HZ-471N	21 1/4"	3' - 0"	3' - 0"	3' - 6"	4' - 6"
HZ-588N	25 1/16"	3' - 6"	3' - 0"	4' - 6"	6' - 0"

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

TITLE:
INSTALLATION DETAILS
for
HZN MODELS WITH THP-3 BASE

ISSUE:

SHEET NO.

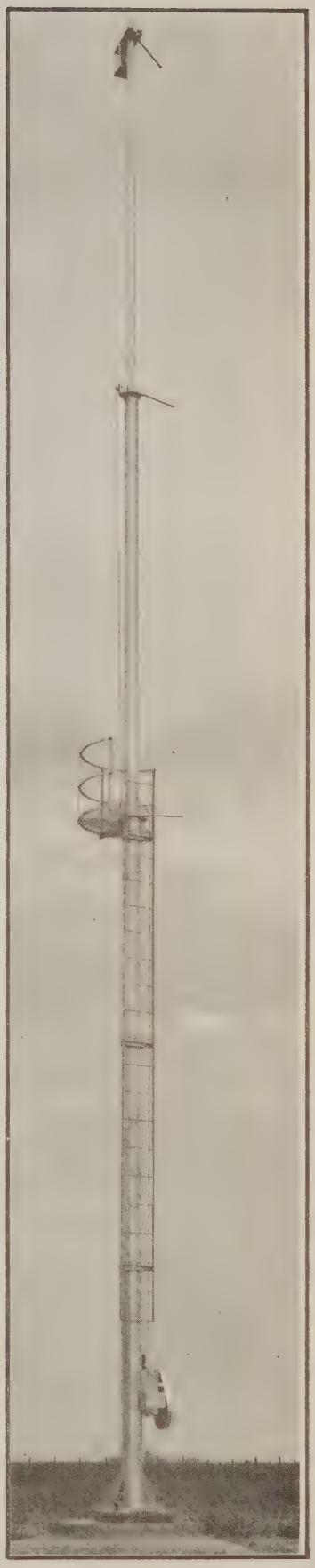
ALL NEW

THE TRI-EX

FREESTANDING

sky needle

TOWERS



FEATURES

Free Standing without aid of bracket or guys
Telescopic cabling extends sections uniformly
Hinged Base Mount included for concrete base
Geared raising and lowering winch included
Motor included with 70', 90' and 100' models

DESIGN

Aerodynamic design presents a pleasing profile
Capable of supporting large Amateur Beams

CONSTRUCTION

Elecrtically welded to exacting jig tolerances
All steel conforms to ASTM specifications

* HOT DIPPED GALVANIZED FINISH *

Model	Height Extended	Height Nested	Weight
TM-240	40 Ft.	22'	650 lb.
TM-358	58 Ft.	22'-6"	1100 lb.
TM-370	70 Ft.	27'	2000 lb.
TM-370HD	70 Ft.	27'	3270 lb.
TM-490	90 Ft.	28'	3550 lb.
TM-5100	100 Ft.	29'	3740 lb.
*TM-5100R	100 Ft.	29'	3820 lb.

* Top 30 feet of tower is rotatable.

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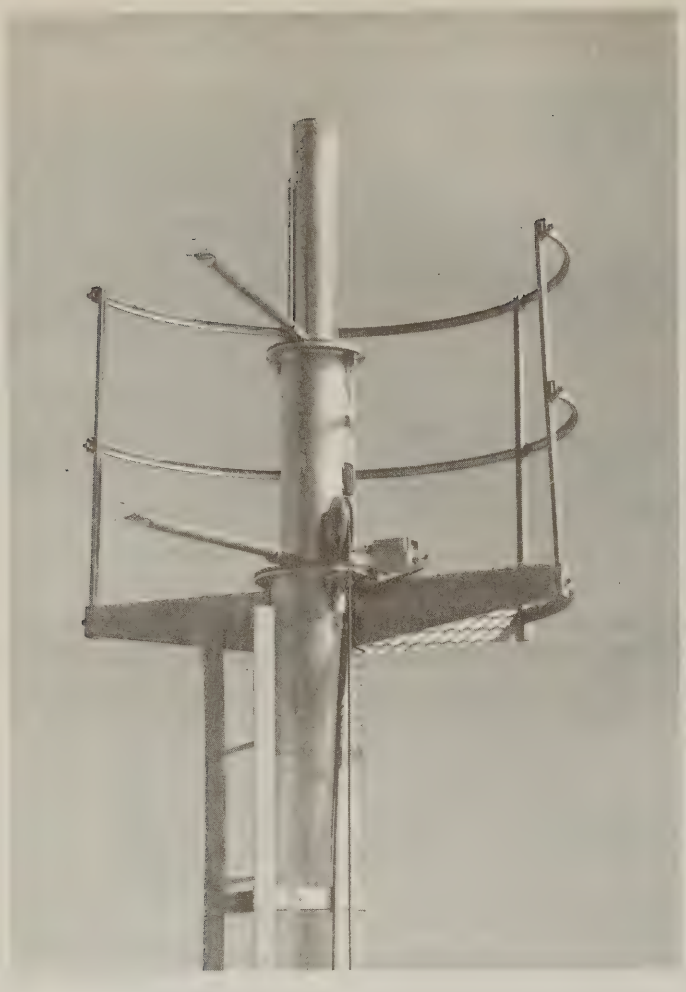
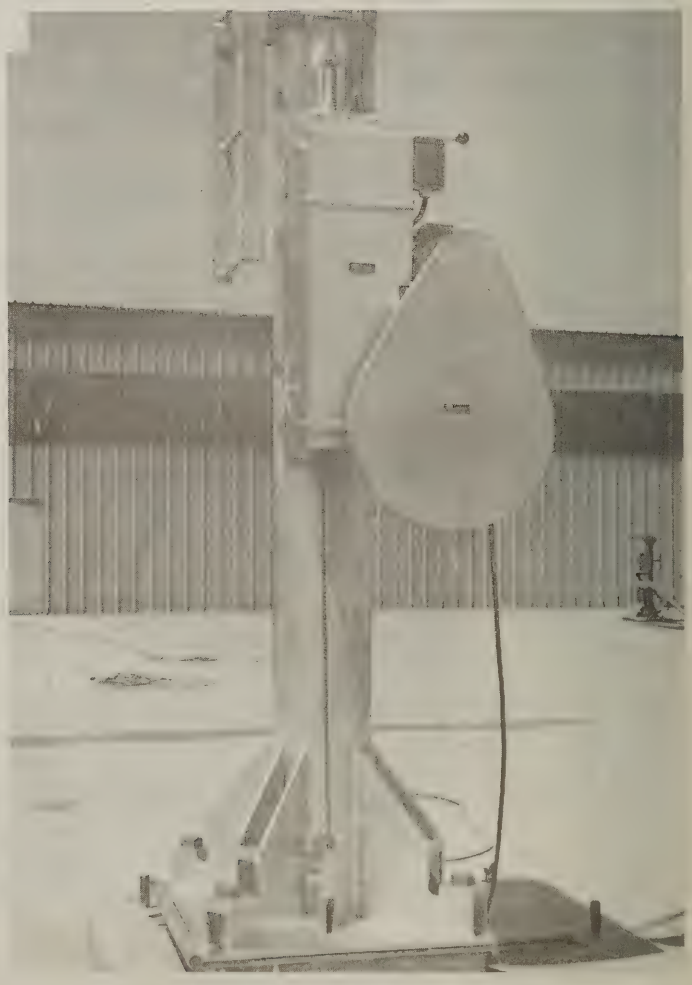


TOP VIEW SHOWING
LADDER, PLATFORM, AND COAX ARMS



BOTTOM VIEW SHOWING
BASE ASSEMBLY AND MOTOR CONTROL

sky needle TOWERS

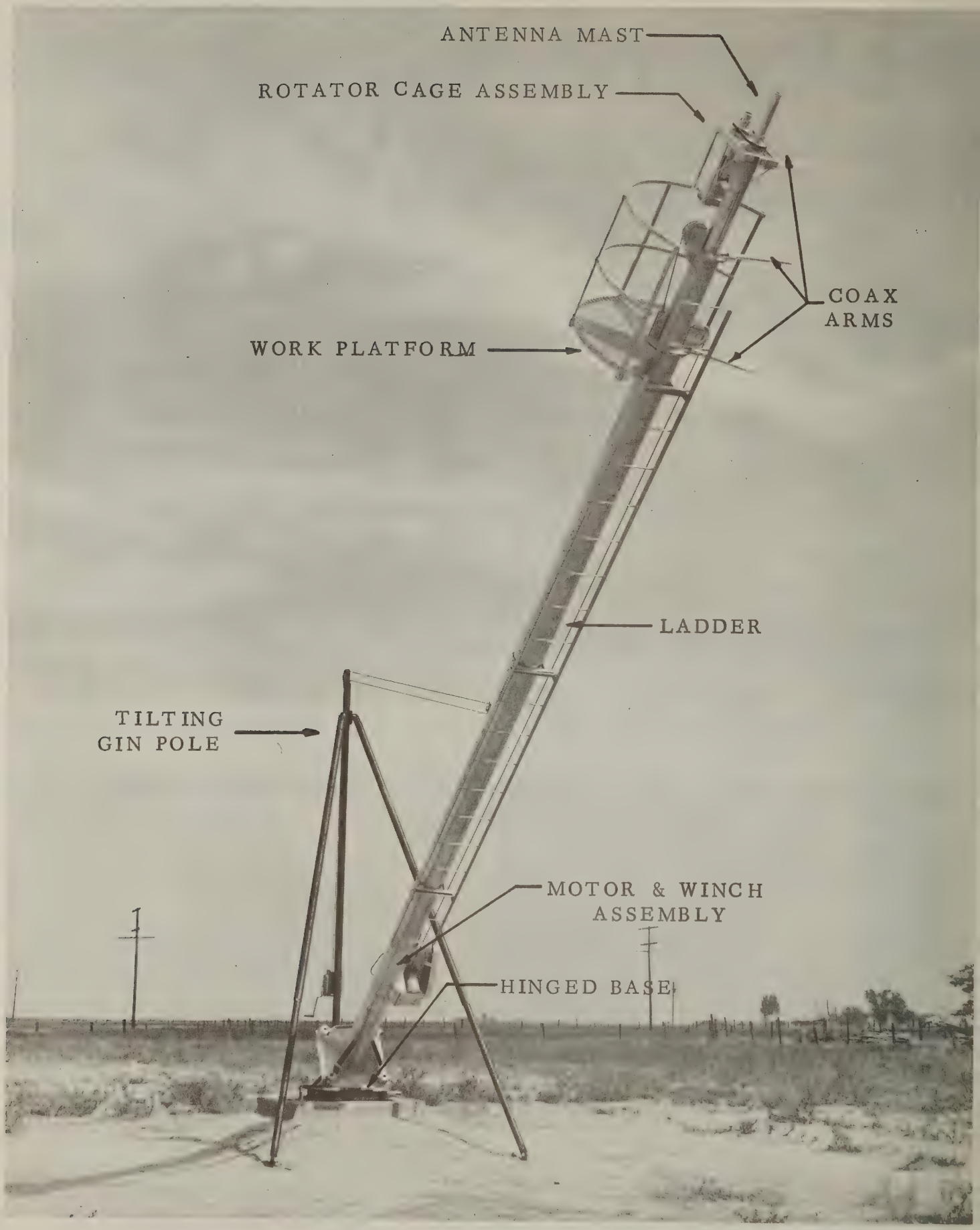
SKY NEEDLE TOWER SERIES DATA					
TOWER MODEL	NESTED HEIGHT	FULL UP HEIGHT	RAISING SYSTEM	FOOTING SIZE	CONCRETE CU.YDS.
TM-240	22 FT.	40 FT.	HANDCRANK RATCHET WINCH	36" SQ. x 4'-6"	1.5
TM-358	23 FT.	58 FT.	HANDCRANK GEARED WINCH	36" SQ. x 5'-6"	1.8
TM-370	27 FT.	70 FT.	MOTOR CONTROL GEARED WINCH	42" SQ. x 6'-9"	3.1
TM-490	28 FT.	90 FT.	MOTOR CONTROL GEARED WINCH	42" SQ. x 8'-0"	3.6
*TM-5100R	29 FT.	100 FT.	MOTOR CONTROL GEARED WINCH	42" SQ. x 8'-0"	3.6
* TOP 34 FEET OF TM-5100R TOWER IS ROTATABLE.					

ANTENNA WIND LOADING *				
TOWER MODEL	MAXIMUM DEAD LOAD ON TOWER ①	WIND/VEL 60 MPH	WIND/VEL 78 MPH	WIND/VEL 95 MPH
TM-240	250 LB.	12.4 SQ. FT.	9.5 SQ. FT.	5.5 SQ. FT.
TM-358	350 LB.	12.4 SQ. FT.	7.2 SQ. FT.	3.6 SQ. FT.
TM-370	550 LB.	37.8 SQ. FT.	20.1 SQ. FT.	9.3 SQ. FT.
TM-490	550 LB.	37.8 SQ. FT.	20.1 SQ. FT.	10.9 SQ. FT.
② TM-5100R	950 LB.	57.4 SQ. FT.	20.1 SQ. FT.	8.8 SQ. FT.

ABOVE WIND LOADS (SQ. FT.) ARE WITH TOWERS AT FULL HEIGHT.
* PROJECTED CYLINDRICAL AREA MOUNTED 2 FEET ABOVE TOP OF TOWER.

① MAXIMUM DEAD LOAD FIGURE MUST INCLUDE WEIGHT OF MAST AND ROTATOR ASSEMBLY AS WELL AS ANTENNA WEIGHT.

② WIND LOAD AREA BASED ON MULTIPLE STACKED ANTENNAS.


ANTENNA MAST
ROTATOR CAGE ASSEMBLY
COAX ARMS
WORK PLATFORM
LADDER
TILTING GIN POLE
MOTOR & WINCH ASSEMBLY
HINGED BASE

Facts About the "Sky Needle" Towers

General Series Data

Base Mount

All "Sky Needle" towers include a hinged base mount which is installed in concrete. This base mount allows the tower to be hinged at ground level and tilted into a vertical position.

Note: A gin pole accessory is available on a loan basis to assist in the initial tower installation. This accessory can be shipped with the tower and is returnable to the factory freight prepaid two weeks after receipt. Credit will be issued upon receipt and inspection of gin pole and hardware.

Finish

All "Sky Needle" towers feature a hot-dipped galvanized finish after fabrication for maintenance free finish.

Cable

Aircraft grade galvanized cable of 7 x 19 construction is used on all models.

Construction

The tubular sections used in the "Sky Needle" towers provide a low wind resistance design and a slim eye-pleasing profile when fully extended.

Top Assembly

The top section of each tower model is adapted to accept an accessory rotator cage assembly. If a rotator assembly is not desired then a mast adapter must be ordered as an accessory item. All standard mast adapters accommodate a two (2) inch O.D. mast size.

Rotator Cage Assembly

Two models of rotator mounting assemblies are available as follows: (CDR) for TR-44 and Ham-M models, (PP) for small size prop-pitch model. All assemblies are complete with bearing, sprockets, chain and are less rotator.

Antenna Mast

The standard mast provided for the "Sky Needle" towers is a two (2) inch O.D. x .180 wall high strength tube. Lengths of 5 feet, 10 feet, and 15 feet are available. For large antennas or stacked arrays, heavy duty masts are available as special items.

Motor Control Assembly

This accessory allows the conversion of a standard hand operated winch system (TM-240 and TM-358) to a motorized system. The TM-240 tower conversion kit includes a worm gear winch in place of the standard ratchet geared winch. A 1/2 H.P. 110v motor with drive pulleys, V belt and guard is also included on both assemblies. The motor switch is located at the tower for local control only.

Remote Control Kit

This kit allows the tower to be operated from a remote location. The control panel features colored light indicators for full up or full down tower position, which are actuated by the tower limit switch assembly.

Individual Tower Model Data

TM-240: Number of sections..... Two (2)
Section sizes..... Top 2 7/8" O.D., Bottom 4 1/2" O.D.
Section lengths..... 21 feet
Extended height..... 40 feet
Winch system..... Combination 6:1/12:1 ratio ratchet geared winch, hand operated.
Cabling system..... Direct lift no pull down provided.

TM-358: Number of sections..... Three (3)
Section sizes..... Top 2 7/8" O.D., Middle 4 1/2" O.D., Bottom 6 5/8" O.D.
Section lengths..... 21 feet
Extended height..... 58 feet
Winch system..... 40:1 ratio worm gear winch, hand operated
Cabling system..... Pull down cable provided.

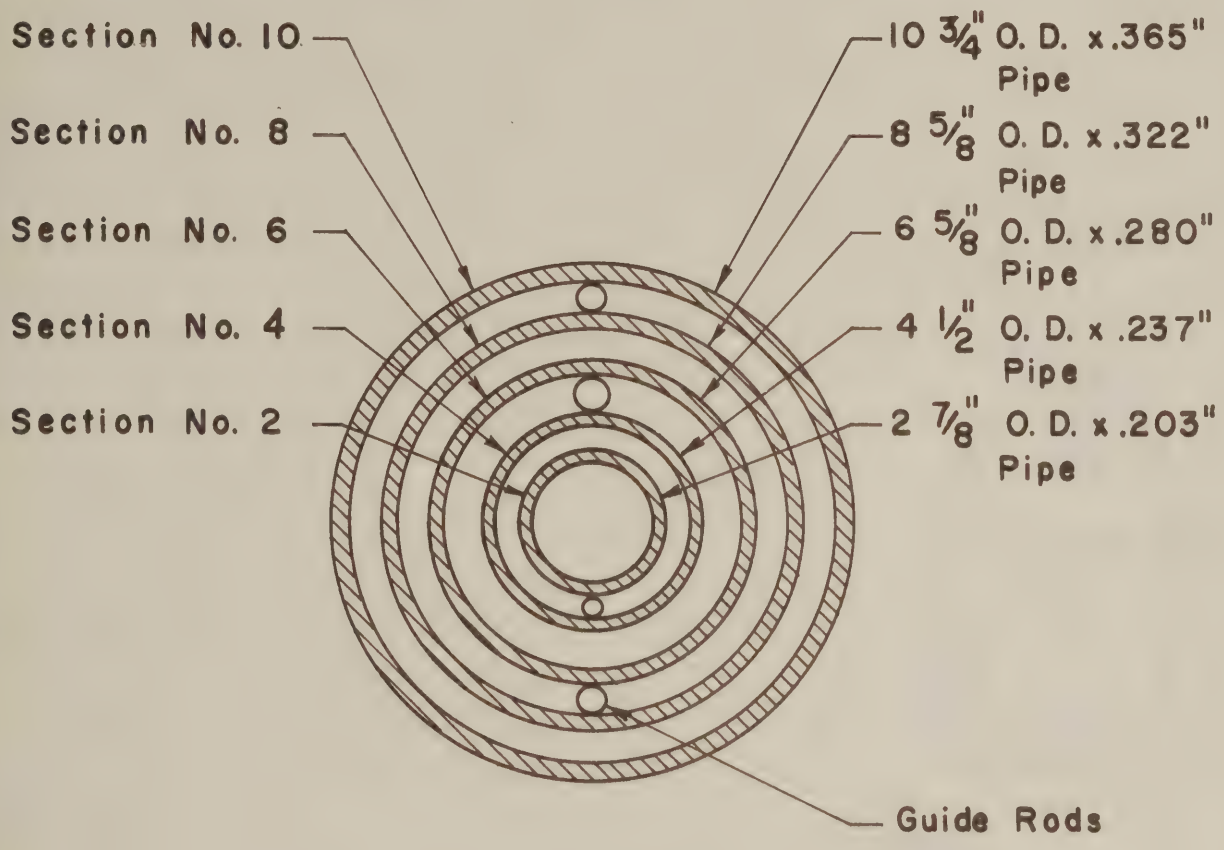
TM-370: Number of sections..... Three (3)
Section sizes..... Top 4 1/2" O.D., Middle 6 5/8" O.D., Bottom 8 5/8" O.D.
Section length..... 25 feet
Extended height..... 70 feet
Winch system..... 32:1 ratio worm gear winch motor driven by 1 H.P. 220v motor assembly, complete with reversing switch and limit switch for up and down positions.
Cabling system..... Pull down cable provided.

TM-370HD: Number of sections..... Three (3)
Section sizes..... Top 6 5/8" O.D., Middle 8 5/8" O.D. Bottom 10 3/4" O.D.
Section lengths..... 25 feet
Extended height..... 70 feet
Winch system..... 50:1 ratio worm gear winch motor driven by 1 1/2 H.P. 220v motor assembly complete with reversing switch and limit switch for up and down positions.
Cabling system..... Pull down cable provided. (This tower model is designed to handle extra heavy antenna loads both in wind area and dead weight).

TM-490: Number of sections..... Four (4)
Section sizes..... Top 4 1/2" O.D., Second 6 5/8" O.D., Third 8 5/8" O.D., Bottom 10 3/4" O.D.
Section length..... 25 feet
Winch system..... 50:1 ratio worm gear winch, motor driven by 1 1/2 H.P. 220v motor assembly complete with reversing switch and limit switch for up and down positions.
Cabling system..... Pull down cable provided.

TM-5100R: Number of sections..... Five (5)
Section sizes..... Top 2 7/8" O.D., Second 4 1/2" O.D. Third 6 5/8" O.D., Fourth 8 5/8" O.D., Bottom 10 3/4" O.D.
Section lengths..... 25 feet (top section 13 feet)
Extended height..... 100 feet
Winch system..... (upper) the upper two sections are extended by hand operated geared winches. Each section is bolted in place after being fully extended.
Winch system..... (main) 50:1 ratio worm gear winch, motor drive by 1 1/2 H.P. 220v motor gear with reversing switch and limit switch for up and down positions.
Cabling system..... Pull down cable provided.
Rotating system..... Located at the top of the third section (6 5/8" O.D.). A small prop-pitch motor assembly rotates the extended upper two sections (32 feet). These two sections are used as the mast for the antennas. For installation and maintenance the sections can be telescoped to allow access to each antenna.

Upon request, special tower modifications and assemblies can be supplied for any "Sky Needle" model.


Section No. 10
Section No. 8
Section No. 6
Section No. 4
Section No. 2
10 3/4" O. D. x .365" Pipe
8 5/8" O. D. x .322" Pipe
6 5/8" O. D. x .280" Pipe
4 1/2" O. D. x .237" Pipe
2 7/8" O. D. x .203" Pipe
Guide Rods

Pipe Spec.– ASTM A-53 Grade B

TOWER MODEL	SECTIONS USED	HEIGHT	
		EXTD.	COLL.
TM-240	2-4	40'	21'-8"
TM-358	2-4-6	58'	22'-4"
TM-370	4-6-8	70'	27'-3"
TM-370HD	6-8-10	70'	27'-3"
TM-490	4-6-8-10	90'	28'-8"
TM-5100	2-4-6-8-10	100'	29'-6"
TM-5100R	2-4-6-8-10	100'	29'-6"

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF.

TITLE:
CROSS SECTION DETAIL (TM)

ISSUE: A - 5 -72

SHEET NO. 130

TOWER .... TRI-EX TM-358 " SKY NEEDLE "

ANTENNA .. HY-GAIN TH6DXX SUPER THUNDERBIRD

ROTATOR .. CORNELL-DUBILIER (CDR)

SITE ..... HARRISON ELECTRONICS
Route 10 at Smith Street
Farmingdale, L.I., New York

TM-370 SKY NEEDLE

Tri-Ex TOWER CORPORATION
7182 RASMUSSEN AVE., VISALIA, CALIF. 93277

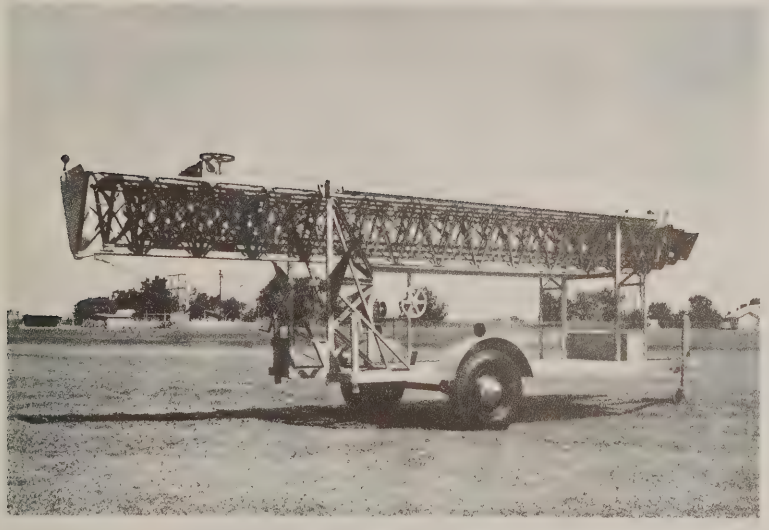
MOBILITY *unlimited*

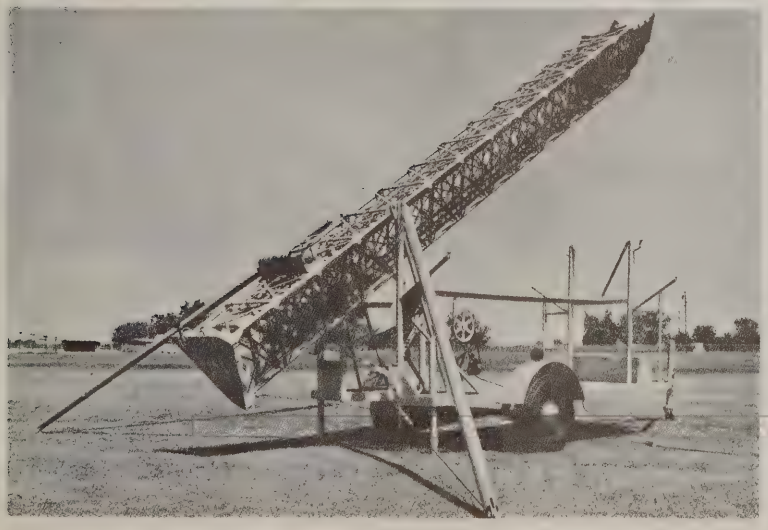
MANUAL OR MOTORIZED

TRI-EX

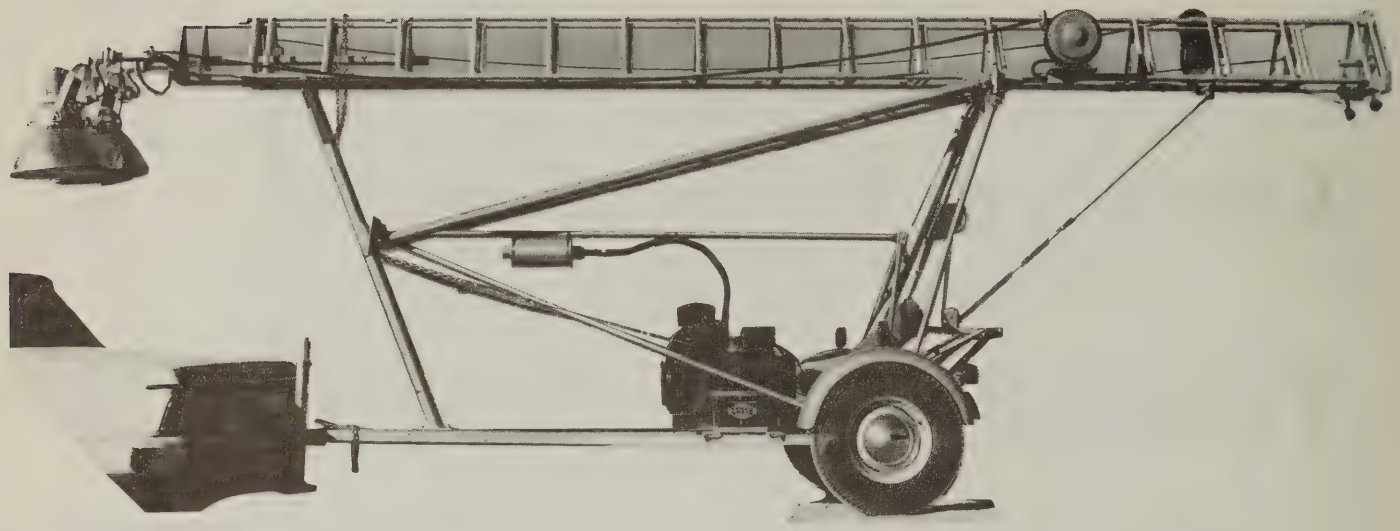
Crank up, self-supporting and guyed

TOWERS and TRAILERS





TR-7 for Medium Weight Towers



TRA-8-HD for Extra Heavy Towers

the Climber

When Accuracy and Time in the field are important.

- **ROLLER GUIDES:** For easy, smooth raising and lowering in all conditions.
- **X-SWAY BRACING:** For maximum strength and rigidity when you need it most.
- **TELESCOPIC OPERATION:** All sections raise and lower together. Use the Climber at any height over 20-feet.
- **MOTORIZED:** Accessories include the appropriate motor for manual or remote control.
- **ALL WEATHER:** The Climber is fully, completely galvanized to combat nature's adverse elements in the field.
- **SELF-SUPPORTING:** No guys needed to 71 feet with Tri-Ex's special base mounts or Tripod Support.

Tri-Ex® TOWER CORPORATION

safe and fast

The Solution to Rapid, Accurate Field Communication. Sets up in a hurry! In rough terrain and paved areas. The ladder is integral.

Tri-Ex's Traveling Tower and Trailer System makes your mobile communications system truly mobile.

It will put you in touch quickly, keep you in touch indefinitely. Anywhere.

Now, Tri-Ex adds another feature.

A trailer tower that can be set, directed by hand. For the ultimate in accuracy!

The Climber.

As simple as that—a ladder attached to the tower. Goes up with the tower. Comes down with the tower as shown here with the HZ-354N Tri-Ex Trailer Tower. Always together. Always ready.

Tri-Ex's HZN tower, on a trailer; a tower that's been proven, tested reliable. The HZN Series has been in Tri-Ex's inventory several years. It's a tower you can count on.

It features heavy, formed steel horizontal members plus full, X-sway bracing throughout for maximum strength and rigidity. A tower that will stay up.

The HZN tower series feature "telescopic operation". All sections raise or lower together under full control of raising cables at all times. This means faster, better, more efficient operation at any height above 20 feet.

The HZN is equipped with a 40 to 1 Timken roller bearing, sealed worm gear drive raising winch.

Tri-Ex's HZ-698N-2 tower will carry your antenna load up to 98-feet.

WARNING: All towers must be equipped with safety-lock devices.

NOTE: All Tri-Ex Climber and HZN towers are furnished with safety-lock devices.

The Tri-Ex "Climber" trailer tower offers a low profile for easy towing or storage. It comes equipped with either ball-type hitch or a towing eye.

The "Climber" HZN trailer tower is available either factory assembled or in a knocked-down mode to facilitate easy shipping.

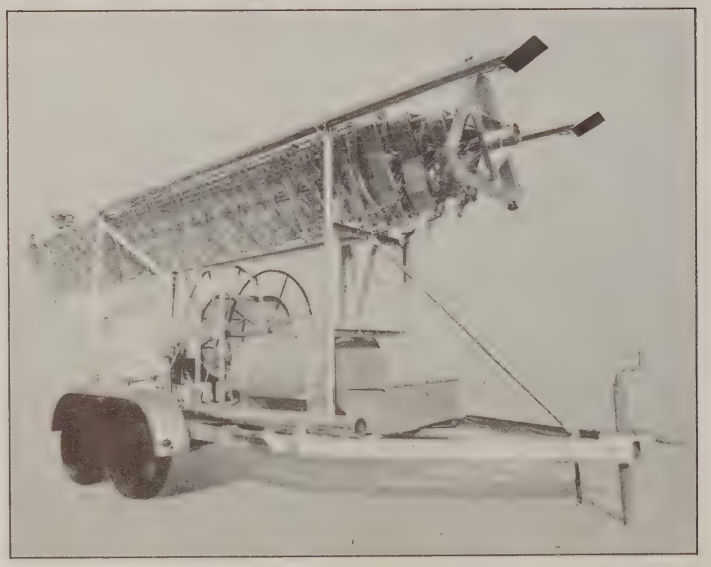
It is hot-dipped galvanized after fabrication for all weather protection or painted, as desired.

The "Climber" will provide on-site reliability, performance and quality. You can depend on it. Ideal for construction site communication, for use as a lighting tower, for microwave application, natural disaster emergency communications, for Emergency Medical Systems.

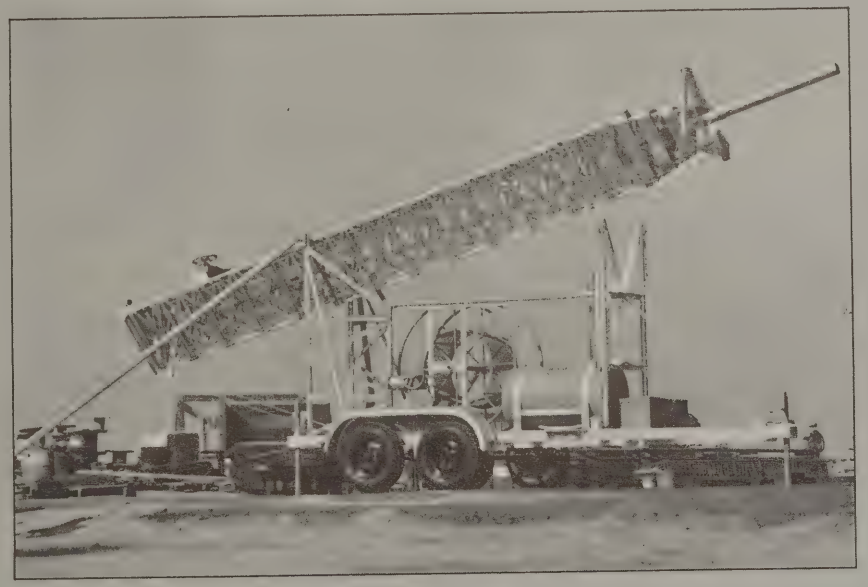
This tower aims to please.

Tri-Ex
TOWER
CORPORATION
7182 RASMUSSEN AVENUE
VISALIA, CALIFORNIA 93277
PHONE: (209) 732-8383
TELEX: 910-377-3493

TRAILER TOWERS FROM TRI-EX READY TO GO ANYTIME ANYWHERE.



Tri-Ex's far reaching mobile tower and trailer system.



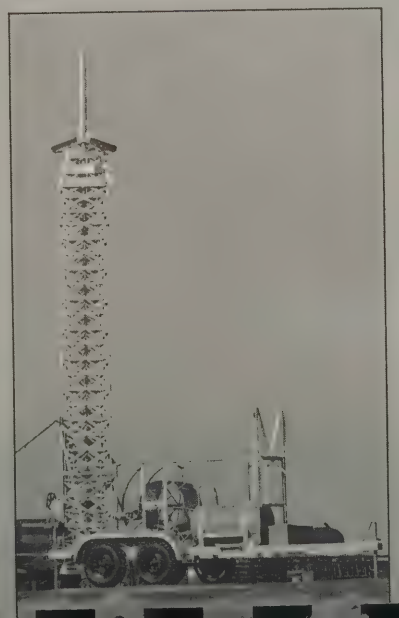
The A, B, C's of establishing a fully operational mobile control communications base with your Tri-Ex tower and trailer are very simple. And it takes very little time.

Assuming a 3-man crew it should take you approximately 30 minutes to two hours (depending on which tower) to be in operation from almost any type terrain.

If you have elected to use a Tri-Ex freestanding tower as shown here, it is simply a matter of (A) extending your tower's outrigger supporting legs, (B) leveling your trailer (Tri-Ex offers trailer mounted levels) by three hand-operated leveling jacks (one forward and two aft) and (C) cranking your tower into a vertical position either by a manually operated crank or a Motor Control Kit (M.C.T.-75 Kit.)

The M.C.T. Kit electric motor is mounted near the base of the tower on the trailer allowing you to tilt your tower from the horizontal towing mode to the vertical mode.

Motors are available from ½ h.p. to 2 h.p., depending on the size of your tower. The



It will follow you anywhere.

Tri-Ex's Traveling Tower and Trailer system makes your mobile communications system truly mobile.

It will put you in touch quickly, keep you in touch indefinitely. Anywhere.

Choose from a TR-7, TRA-8 or a TRA-8-HD Series.

Applications

Tri-Ex mobile towers have been in use internationally for years. They are regarded as invaluable to construction companies, for single system operators, for active, large or multinational corporations where being in touch can literally be the difference between polylingual chaos and order, profit and loss, unnecessary delay and cost savings efficiency.

Tri-Ex is an expert in mobile tower and trailer design. If you have a mobile communications need, Tri-Ex has a system for you.

To fit your job.

To fit your budget.

Tri-Ex Systems

Available are TR-7, TR-7-HDO light duty trailers.

Need something for really tough work in the desert or wilderness?

Available are TRA-8, TRA-8-HD and TRA-8-HDS heavy duty trailers.

Shown here is the HZ-471 heavy duty tower from Tri-Ex. It's mounted on a TRA-8-HD trailer that features dual-axle tandem wheels for road profile performance that is unexcelled for constant and positive traction in uneven terrain conditions.

Locking System

Tri-Ex's self-supporting towers feature the proven SL locking system (see illustration at left) that locks each tower section into place and effectively removes the weight of the raising cable from the tower after erection. This locking system permits a man to safely climb the tower if needed.

All locking arms are spring loaded and can be controlled from ground level.

Tri-Ex recommends its Guy As You Erect (G.A.Y.E.) system for towers from 80-ft. to 140-ft. [illegible] you [illegible]

Now it's simply a matter of running your Tri-Ex tower up. Your motor can do this, too.

With Tri-Ex tower and trailer systems getting into operation is as simple as A, B, C. But, then all good designs are simple.

Tri-Ex®
TOWER CORPORATION
7182 Rasmussen Ave.
Visalia, Calif. 93277

available for lighter or less rugged mobile communications needs such as Tri-Ex's TRA-8 trailer which offers a single-axle platform.

Consultation and information is available from the factory or your local representative on both the TRA-8 and TR-7 Series trailers.

Design and Construction

Tri-Ex trailers are of all steel construction, offer low profile for easy towing or storage, come equipped with either ball-type hitch or towing eye.

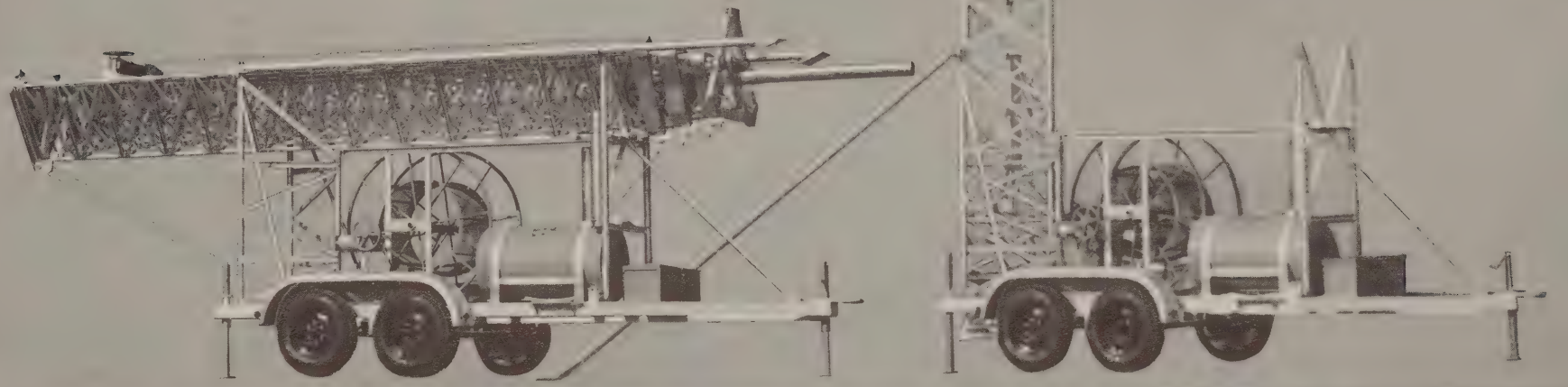
TRA-8 and TRA-8-HD Series trailers are for towers with 20-ft. section lengths; TR-7 Series trailers are for towers with 10-ft. and 20-ft. section lengths.

Tri-Ex trailers are available either factory assembled or in a knocked-down mode to facilitate easy shipping.

Trailers are available hot dip galvanized after fabrication for all weather protection or painted, as desired.

Tri-Ex Tower trailer systems are dependable. They provide on-site reliability, performance and quality.

And they'll follow you anywhere.



FEATURES:

Mobility provides easy moving from one location to another.

Standard and Special models available.

Manual Crank or electric crank option.

Self supporting or guyed towers.

Heavy duty or light duty systems.

APPLICATIONS:

Construction. For roadbuilding, dam sites, military installations, oil pipelines.

Light towers. For field work, temporary airfields, special outdoor events not in structured areas.

Microwave towers or as relay towers.

Meteorology.

Natural Disaster Emergency communications systems.

Emergency Medical Systems.

Police and Fire Control Communications.

Field Communications for Military Applications.

Temporary Towers during replacement and repair periods.

Portable AM, FM and TV remote broadcast towers.

Microwave Site Survey towers.

TRI-EX TRAILER SYSTEMS DATA

Applicable Tri-Ex towers for use with trailers.

Designed to hold T, THD, HZ special heavy duty towers, and H, HS, MW, LM and W Series Tri-Ex towers. Tower heights from 18 to 147 feet.

ACCESSORIES:

TRA-8 and TRA-8-HDS Series

(A-1) Two all-steel outrigger arms for supporting tower locked into position; to increase rigidity of trailer base assembly.

(A-2) Storage Box to haul necessary tools and other tower and antenna maintenance equipment.

(A-4) Lights. Running lights (clearance), turn signals, brake lights.

(A-5) Tires. TRA-8 has two tires. TRA-8-HD has four tires, dual axle. Spare tire mount available for both Series. Tires are standard U.S. wheel and tire mounts, or standard European (Mercedes) sizes.

(A-7) Electric Brakes for use when towing large towers and heavy loads.

(A-8) MCT-75 Motor Control Kit. Standard ¾ h.p. Large MCT kits available.

(A-9) Auxiliary Fuel Tank. 50-gal. shown with HZ-471 tower. Varying sizes available. Fuel for power generator or normal vehicle fuel.

(A-10) HAM-M type rotator or prop pitch motor system available for rotating antenna.

(A-11) Side mounted reel for storing transmission cable for tower in use.

(A-12) Trailer Mounted Levels for site assistance in leveling trailer on uneven terrain.

Trailer Model TR-7 Series

(A-1) Fenders
(A-3) Lights
(A-4) Storage Box
(A-5) Tires (2)

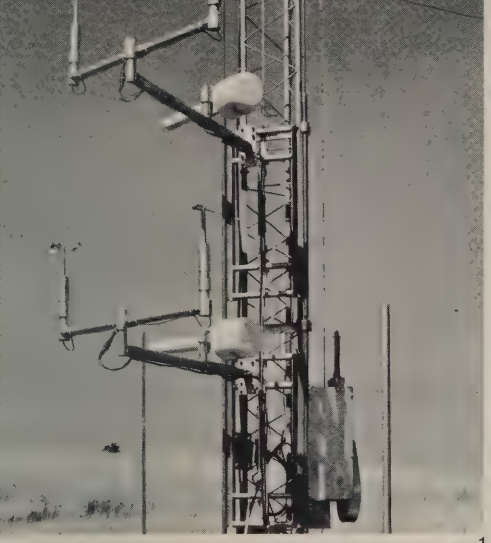
Tri-Ex®
TOWER CORPORATION
7182 RASMUSSEN AVENUE
VISALIA, CALIFORNIA 93277
PHONE (209) 732-8383

Proven

- No Tower Climbing
- Easy Instrument Access
- Carriages Positioned Automatically
- Easy To Install—Adaptable

An Elevator/Track System That Works.

Protect your instruments. Be sure of their precise calibration. Inspect them hourly, daily, or weekly without fear of their being "accidentally" damaged while climbing. Tri-Ex Tower Corporation's automated, instrument-positioning tower-mounted elevator and track system is tested and proven. The lift mechanism, called a Tracking Tram Monitor (TTM), is guided by precision cabling the entire height of the tower. Mechanical stops ensure placement of your instruments where you want them...safely. Ideal for environmental air test studies, for measuring wind velocities, for hazardous areas.



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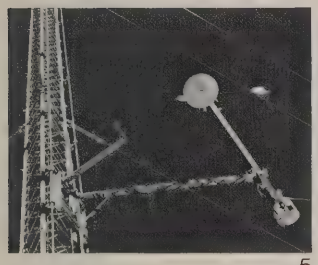


5

A much needed, practically engineered Tracking Tram Monitor tower system for environmental jobs.

More than 50 major Tri-Ex Tower Tracking Tram Monitor Systems have been installed all over the world, since production first began in 1971, in places as far away as Egypt, Saudi Arabia, France, Germany, China and Mexico. These early systems are working today—on four continents—doing different jobs under different conditions.

Tri-Ex's first TTM System was installed in the United States at Baton Rouge, Louisiana. TTM Systems have since been installed at strategic sites in Texas, New Mexico, Tennessee, Arizona, Oregon and Washington.

Tri-Ex TTM Systems are ideal for data collection instruments in normal environments and exceptionally useful in potentially hazardous areas where, for example, it is necessary to monitor nuclear energy station emissions or power stations using high sulphur fuel.

Today, Tri-Ex TTM Systems are working on a 24-hour basis in such diverse industries as atomic reactor sites, open-pit copper mines and airports. Tri-Ex TTM Systems are working because they save time, save money, and eliminate OSHA climbing requirements.

All Tri-Ex TTM Systems meet UBC and EIA code requirements as well as AEC (Department of Energy) specifications.

Tri-Ex's TTM System is a unique, safe and practically engineered method for raising and lowering clusters of instruments on guyed towers in both normal and hazardous environments.

Scientific testing instruments and associated equipment are raised on supporting booms attached to locked-in carriages that traverse upward and downward on parallel tracks securely fastened to the tower. The carriages are raised and lowered by cable.

Each cable-actuated instrument carriage is capable of supporting four five-foot horizontal booms. Each carriage is programmed to stop automatically at the predetermined height required.

Mechanical stops are employed rather than electronic stops on Tri-Ex TTM Systems to assure absolute reliability of operation. Mechanical stops are not hampered by bad weather conditions and do not suffer the problems associated with electronic stops such as worn points, terminal strip corrosion and other similar common problems. Furthermore, positive mechanical stops prevent overdrive of predetermined heights. Tri-Ex does not want to risk carefully calibrated research stations to a potentially defective electronic part.

FEATURES

No Climbing of Tower: TTM Systems eliminate difficult and dangerous tower climbing; reduce manpower requirements; save time; promote safety. Anyone can read and calibrate instruments at ground level. (1)

Carriages Positioned Automatically: TTM carriages are attached to an independent "messenger cable" that repositions the carriages at exactly the same locations each time they are raised after servicing. (2)

Easy Access To Instruments: All TTM carriages can be serviced at ground level safely and rapidly. Servicing is not limited to what can be carried aloft. (3)

Safety-Conscious Motor Control: A reversible AC electric motor powers the winch drive assembly (supplied in 115v or 220v, single phase, 60Hz service; 50Hz also available). A TTM momentary control switch is used to assure safe operation of the system—the motor automatically stops should the operator release the control due to any unforseen distraction or other operational reason. (4)

Variable Instrument Booms: Boom lengths of either 2-feet or 5-feet can be used. The booms can be positioned at 90 degrees to the tower face, or at 60 degrees right or left of the tower face. Stubs are 1-inch and 1½-inch O.D., respectively. (5)

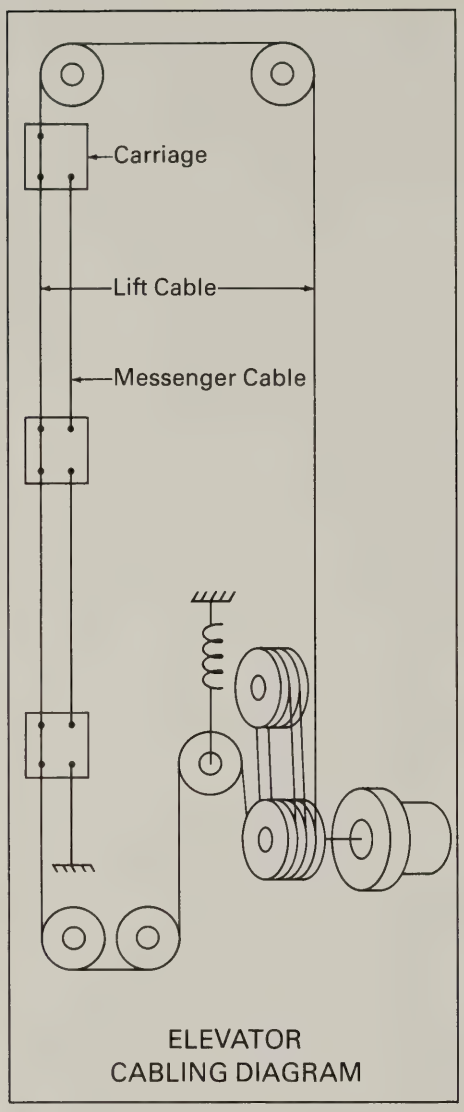
Positive Raising and Lowering Cabling: Friction drive pulleys, coupled to a worm gear reducer and electric motor, control operation of the sturdy TTM carriages.

Restricted Carriage Movement: Stabilizer bars at each carriage level restricts carriage movement to one degree.

Fits Most Towers: The TTM track system fits towers having a minimum cross section of 14-inches with tubular legs. Angle-legged towers may require some modification to the mounting hardware. Factory engineering for specific problems is available upon request.

Fits Existing Towers: TTM Systems can be easily installed on standing towers.

Tri-Ex®
TOWER
CORPORATION



ELEVATOR
CABLING DIAGRAM

TTM APPLICATIONS

Weather Monitoring, Hazardous Dust Monitoring, Noise Pollution, Antenna Testing, Lighting, Marine Navigational Aids, FAA Beacon Lighting, Scientific Instrumentation Platforms, Radiation Testing.

Easy To Install: Tri-Ex TTM System installation can be accomplished by using tools common to erection of tower assemblies.

INSTALLATION ON YOUR TOWER AT YOUR SITE BY TRI-EX PERSONNEL CAN BE ARRANGED AT TIME OF ORDER. SATISFACTORY OPERATION GUARANTEED.

TRI-EX TOWER TTM SPECIFICATIONS

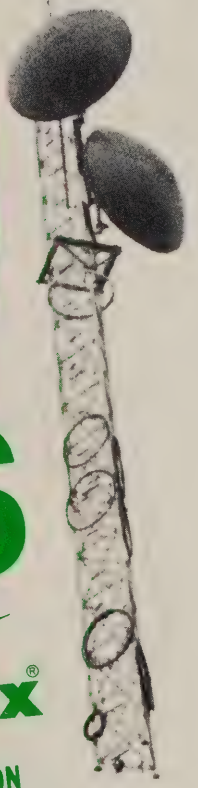
Type	Positive lift and pull
Carriage guide cables	2 each
Guide cable size	⅜" dia.
Carriage lift cable	One continuous
Size lift cable	¼" dia.
Messenger cable	From carriage to carriage
Messenger cable size	¼" dia.
Lift cable pulleys	Top and bottom
Tension on guide cables	1,000 lbs.
Max. lift standard	500 lbs. (5 carriages)
Max. lift heavy duty	1,000 lbs. (10 carriages)
Winch	Motor driven 115V/60Hz standard; 230V 50Hz special
Ratio drive to cable drum	40:1 Standard; 50:1 heavy duty
Stabilizer	1 set per carriage

SYSTEM COMPONENTS ORDERING INFORMATION

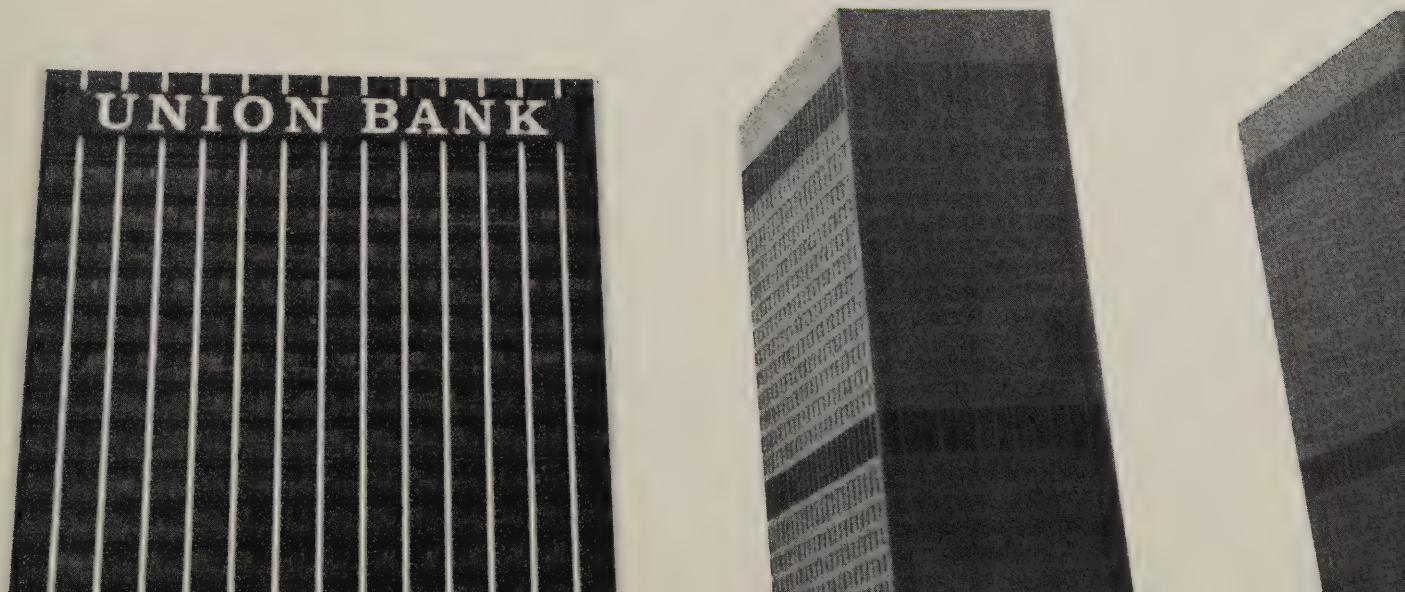
Model TTM-MD	Includes winch, motor, control, cable drive and all pulleys and mounting brackets
Model TTM-CS	Includes lift cable, messenger cable, carriage track cables and stabilizers
Model TTM-C48	Carriage Assembly for mounting instrument booms
Model TTM-B2	Instrument Boom for carriage, 2-foot long
Model TTM-B5	Instrument Boom for carriage, 5-foot long

Tri-Ex®
TOWER CORPORATION
7182 RASMUSSEN AVENUE
VISALIA, CALIFORNIA 93277
PHONE: (209) 732-8383
TELEX: 910-377-3493

TURN KEY JOBS



Tri-Ex®
TOWER CORPORATION



It took skill, cooperation and ingenuity plus the service of a heavy duty helicopter to lift this 60-foot section to its site on the roof. The structure is the second section of a Tri-Ex T-36 HX microwave tower that, when completed, will stand 120-feet above the Union Oil Center's headquarters building in downtown Los Angeles, California.

It was a big operation and called for precise maneuvers. The pilot could not estimate his altitude accurately because tall buildings blocked the horizon. It took a spotter on the roof, via radio communications, to guide the pilot to the pre-assigned tower base.

Final completion of the Tri-Ex microwave tower required a dash of spacecraft technology. A docking mechanism similar to that used by astronauts in space was mounted on a funnel attached to the already in place lower 60-foot section of the tower. Then the upper tower section was outfitted with a mating cone. Long, strong cables were laced through the tower's bolt holes. When the helicopter got close enough over the site, the Tri-Ex rigging crew aligned the tower's legs, section to section, by pulling on the guiding cables.

Wind and helicopter vibrations made the operation almost impossible. It took three attempts to complete the installation. Now, it's another Tri-Ex tower up and working.

Strong men for strong towers. We have both at Tri-Ex Tower Corporation.

If there's a job few people want, it's hanging steel...way up.

It's even worse when the weather's going the other way. Like rain and wind.

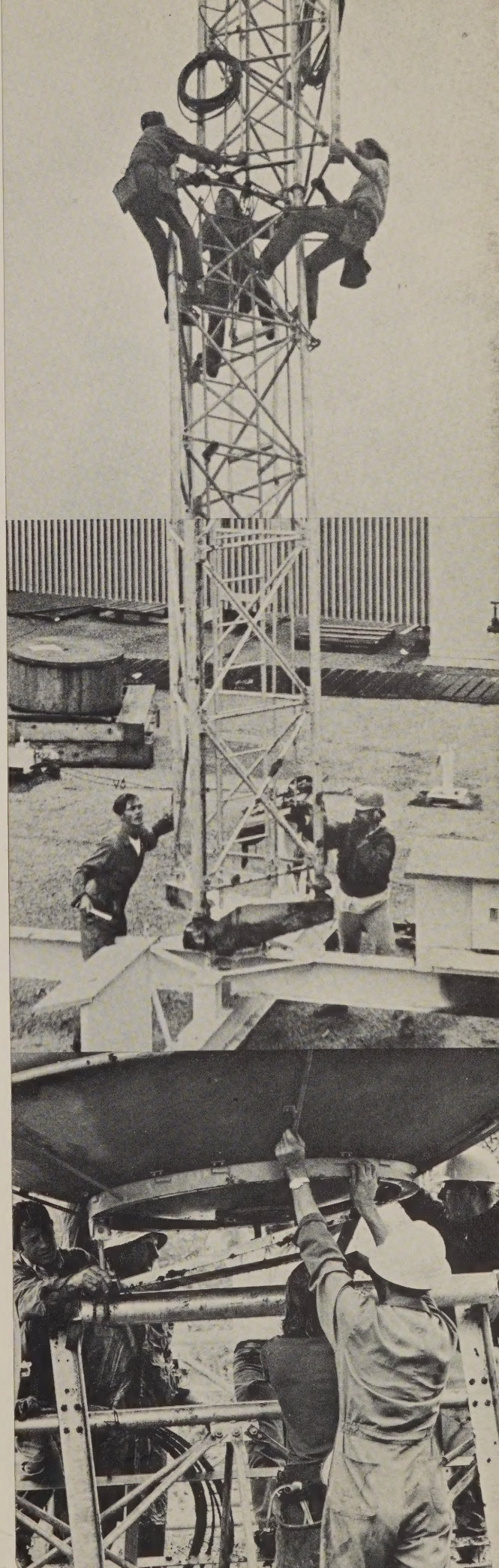
It takes a special kind of man to hang up there. A special kind of savvy and a special kind of toughness.

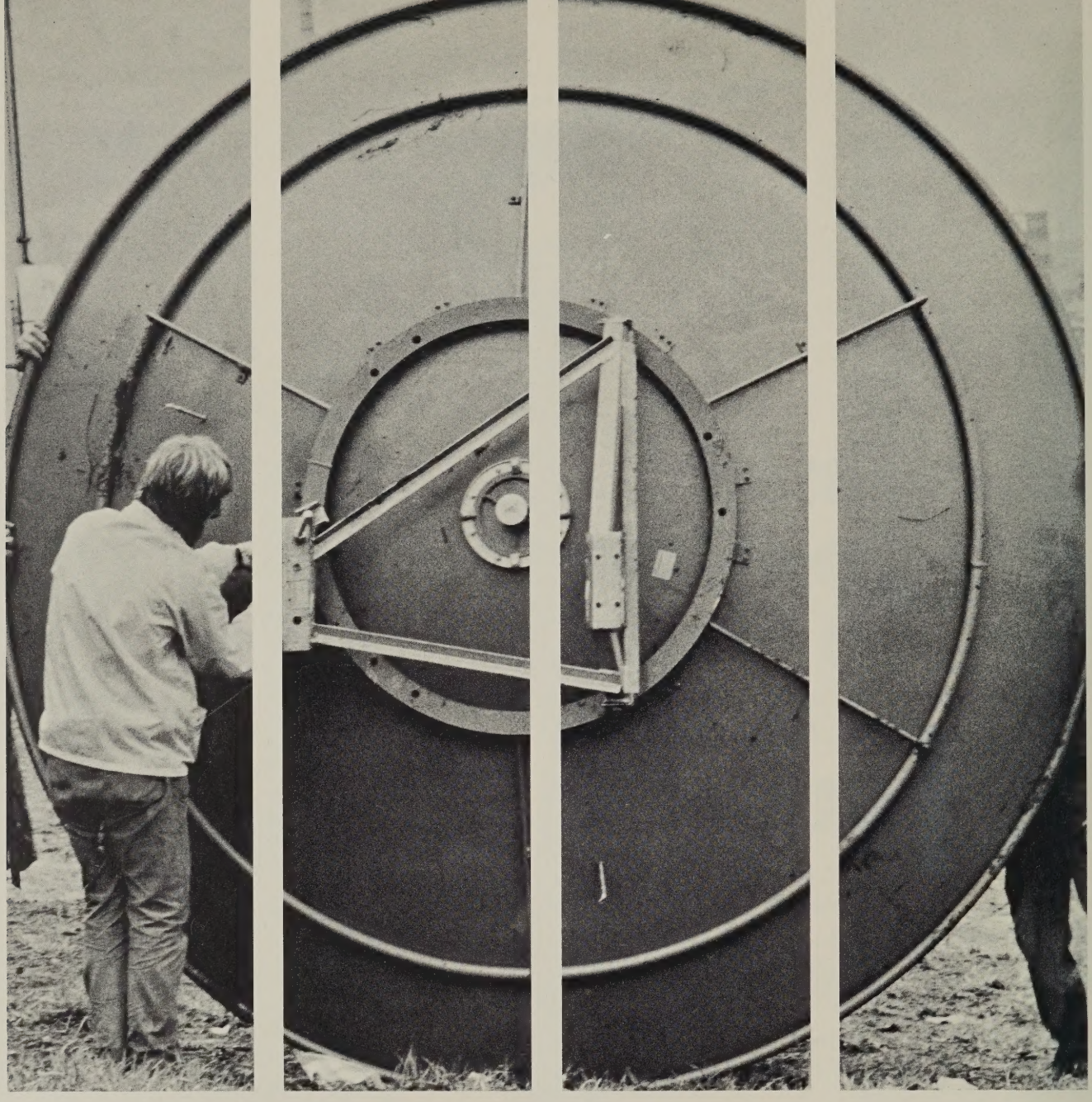
Up there you've got to know your business.

Tri-Ex Tower Corporation's business is building towers. The best. And because Tri-Ex's reputation is on the line every time a tower goes up...we employ the best available installation crews. Men who've been tested, who know steel, know towers.

We've been in the tower business more than 20 years. We've learned a lot in that time. We know what we are promising when we say: TURN KEY JOB.

Complete installation on your site, ready to be put into use. Like this job shown here. In Los Angeles on top of the Union Oil Company of California Center overlooking the freeways. A congested area with minimum rooftop working area. Another Tri-Ex Tower Turn Key Job.





Assembly starts on the ground.

The Tri-Ex T-36 HX microwave tower was assembled in two 60-foot sections on the ground before helicopter lift-off. Since microwave beams cannot bend or go through obstructions such as buildings or trees, precise alignment of the antennas was required.

The dish-shaped antenna above – the tower has four antennas – focuses radio waves into a very narrow beam which in turn is transmitted to another relay station in the network. So, accuracy is necessary.

The system shown here is jointly owned by Union Oil Company of California and Motorola Corporation. It was designed by Union's Corporate Information Services. The system, of which this Tri-Ex tower is a part, has a capacity or 480 simultaneous voice conversations and directly links the company's headquarters with its Houston and San Francisco offices.

This needed T-36 HX microwave tower was another Tri-Ex Tower Turn Key Job. Write today and ask how Tri-Ex Tower can help you.

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Visalia, Calif. 93277

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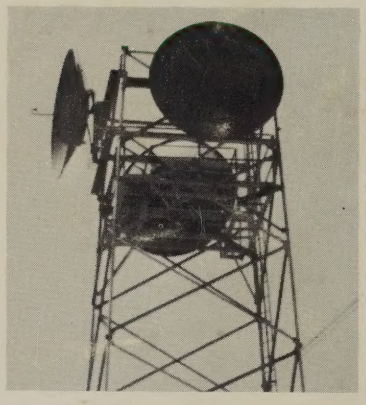
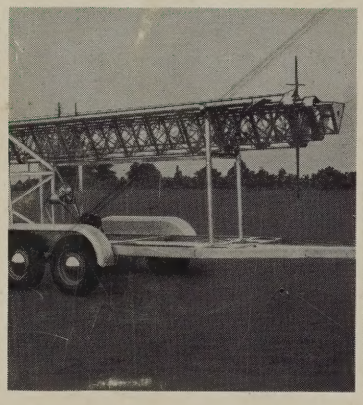
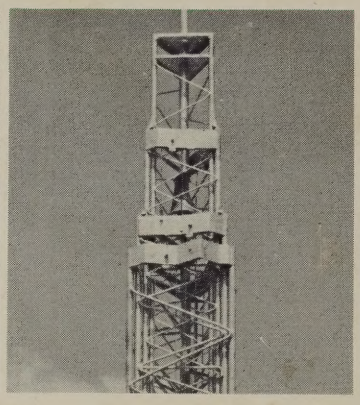
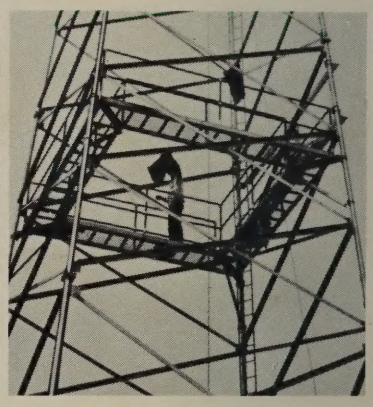
COMMERCIAL CATALOG

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